Pre-CERCLIS Screening Assessment

Astro Plating Inc.
915 Roosevelt
San Antonio, Bexar County, Texas
TXD044773265

REGION VI

Prepared in cooperation with the U.S. Environmental Protection Agency

June 2010

TCB9

PRE-CERCLIS SCREENING ASSESSMENT

Astro Plating Inc.
915 Roosevelt
San Antonio, Bexar County, Texas

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APPENDICES

1 INTRODUCTION

The Texas Commission on Environmental Quality (TCEQ), under a grant from the United States Environmental Protection Agency (EPA) Region 6, conducted a Pre-CERCLIS Screening Assessment (Ref. 1) at the Astro Plating Inc. site in San Antonio, Texas. The goal for completing the Pre-CERCLIS Screening Assessment for the Astro Plating Inc. site was to determine whether further steps in the site investigation process are required under CERCLA.

Completion of this Pre-CERCLIS Screening Assessment included reviewing existing site information/file material; determining ground water and surface water characteristics; determining surrounding population characteristics; and conducting an onsite and off-site visual inspection to determine if hazardous substances have migrated to surrounding areas. This document includes site information including a description of the site and its location (Section 2), potential sources and releases (Section 3), a completed Pre-CERCLIS screening checklist (Section 4), pathway assessments for ground water, soil, surface water, and air (Section 5), and references (Section 6).

2 SITE INFORMATION

2.1 Location and General Information

Site Name:	Astro Plating Inc.
Alias Site Name(s):	Astro Plating San Antonio
Directions to Site:	From I-35 traveling south in San Antonio, exit onto I-37/US-281 toward Corpus Christi (158B). Take exit 140A for Florida St. and Carolina St. Turn right on Florida Street, then take a left on S St. Mary's St. Continue onto Underpass, then onto Roosevelt Ave. Destination will be on right before the I-10 overpass.
Latitude:	29.39472°
Longitude:	-98.48556°
Address:	915 Roosevelt
City:	San Antonio
County:	Bexar
State, Zip Code:	Texas, 78210-3880
EPA ID No.:	TXD044773265
State ID No.:	RN100551985 CN600262935 CN601740251
Other ID No.:	Stormwater Discharge (TXR05Y601) ACTIVE 6/28/09 – present Stormwater Discharge (TXRNEU116) CANCELLED 11/09/06 – 06/26/09 Stormwater Discharge (TXR05K177) CANCELLED 11/12/01-11/07/06 Air New Source Permit 25526 CANCELLED Air New Source Registration 72375 IHW Corrective Action Solid Waste Registration 37656 ACTIVE 1. IHW Generation 2. IHW Generation 3. IHW Storage
Ownership:	Private
Owner/Operator:	Daniel Salinas
Telephone:	210-533-7126
Years of Operation:	1976-present
Inspection Completed on:	February 24, 2010
Personnel:	Adrienne Love and Susy Loftus, TCEQ Central Office, Austin Jorge Salazar, TCEQ Region 13 Office, San Antonio Daniel Salinas, owner/operator of Astro Plating Inc

2.2 Site Description

Astro Plating Inc. (Astro Plating, the "Site") consists of one main building (Appendix D Photograph 1) and former bumper manufacturing building acting as a storage shed, currently, on 1.46 acres in San Antonio, Texas (Appendices A and B). Operations take place in the main building, which is separated into designated activity areas; Storage/Racking (Appendix D Photograph 1), Electroplating (Appendix D Photographs 2-10), Straightening/Welding, Polishing/Buffing, Wastewater Pretreatment, and Metal/Paint Stripping (Appendix D Photographs 11-15). The office is located in the easternmost region of the main building. The adjacent building on the property is a former automobile bumper manufacturing area but is now used for storage.

The site has been owned by Mr. Daniel Salinas since it opened in 1976. On July 23, 2007 and May 1, 2009, TCEQ Region 13 investigator Mr. Jorge Salazar inspected the Astro Plating Inc site (Ref. 2). After the court ruling against the Site July 13, 2009, Mr. Salinas claimed he would stop operations at the Site, according to Mr. Salazar (Appendix E, p. 1). However, during the site visit, two employees were working in the Polishing/Buffing Area, and one was working in the Electroplating Room. The TCEQ noted several full chemical and rinsate vats including one, which was bubbling. Upon questioning during the February 24, 2010 site visit, Mr. Salinas said he was still doing nickel and chromium plating and ornamental plating work (Appendix E, p.7).

The site is located in south San Antonio in a mixed industrial and residential area. The nearest residential area is approximately 250 feet from the site, across Roosevelt Street. The nearest school, Brackenridge High School, is less than ¾-miles north of the site (Appendix B). The San Antonio River is ¼-mile to the west and ½-mile to the south of the site. The site is north of the I-10 overpass, and I-37/US-281 is ½-mile to the east (Appendix A). The site is secured by a chain-link fence that borders the perimeter (Appendix D Photograph 18).

POTENTIAL SOURCES AND RELEASES

3.1 Source and Release Information

Potential sources for hazardous substances associated with the Site include rusty drums and potentially leaky tanks of caustic acid and nickel, chromium, zinc, and copper rinse. There are approximately 10 rusty 55-gallon and smaller drums (Appendix D Photographs 13 and 14; Appendix E, p. 3) and approximately 15 bath/rinse tanks (Appendix D Photographs 2-7). The tanks are located in the Electroplating Area with additional drums located in the Metal/Paint Stripping Area. The outside western wall and the back northern wall of the Metal/Paint Stripping Area are rusty and have some orange and pink staining (Appendix D Photographs 16-19). A short concrete brick wall that stood on the northern outside perimeter of the building has collapsed (Appendix D Photograph 18)

On May 1, 2009 and July 23, 2007, the TCEQ performed a Compliance Investigation Report at the Site. Fourteen violations were documented at the July 2007 investigation (Ref. 2, p. 2):

1. Failure to cease, suffer, allow, or permit the collection, handling, storage, processing or disposal of industrial solid waste.
2. Failure to properly complete industrial and hazardous waste manifests.
3. Failure to maintain complete and correct records of all hazardous and industrial solid waste activities.
4. Failure to properly label hazardous waste tanks and containers.
5. Failure to use accurate 5-digit Texas Waste Classification Code on all manifests and the generator's Solid Waste Registration Number on all manifests.
6. Failure to submit a complete notification of all solid waste management activities conducted at the facility.
7. Failure of the facility's contingency plan to describe the actions taken by personnel in response to emergency situations.
8. Failure to maintain training documents on file for workers who handle hazardous waste.

9. Failure to submit to the executive director (ED) copies of hazardous waste determinations for all wastes managed onsite.
10. Failure to submit certification compliance to indicate that the tanks onsite have met tank requirements.
11. Failure to submit to the ED for review & approval with modifications, a closure plan to address the incomplete closure described in Finding of Fact No. 3 of Agreed Order, TNRCC Docket No. 1998-1071-IHW-E.
12. Failure to implement & submit to the ED a copy of the facility's Source Reduction & Waste Minimization Plan
13. Failure to submit a report which summarizes the finding of a site investigation to the ED for review and approval.
14. Failure to retain onsite copies of Land Disposal Restrictions notices that had been submitted with off-site waste shipments for treatment and disposal.

A hazardous release is strongly suspected. The three TxDOT monitoring wells onsite and the three offsite, in the TxDOT right-of-way (ROW), sampled on February 13 and 16, 2009, have elevated chromium concentration levels ranging from nondetectable (<0.01 mg/L) to 0.796 mg/L (Ref. 3, p. 3). The PCL for total chromium is 0.10 mg/L (Ref. 3, p. 3). The tracking numbers for the monitoring wells installed by TxDOT are unknown, but at least two were installed September 5, 1995 in the TxDOT ROW (Ref. 3, p. 34, 35). The listed Water Driller's License number also did not produce a result on the Water Well Driller's Database (Ref. 3, p. 34, 35)

4 PRE-CERCLIS SCREENING ASSESSMENT CHECKLIST

Complete the following checklist. If "yes" is marked, please explain below.

	Yes	No
1. Does the site already appear in CERCLIS?		X
2. Are there potential waste sources at the site?	X	
3. Is a release of hazardous substances observed or strongly suspected, and are there receptors in the area that may be affected? If yes, site may require immediate attention.	X	
4. Does the site consist of a release of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found?		X
5. Is the release into a public or private drinking water supply due to deterioration of the system through ordinary use?		X
6. Is some other program actively involved with the site (i.e., another Federal, State, or Tribal program)?	X	
7. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (i.e., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?		X
8. Is there sufficient documentation that clearly demonstrates that no release has occurred or could have occurred that could cause adverse environmental or human health impacts (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, EPA approved risk assessment completed)? Provide reference(s).		X

2. Potential waste sources include approximately ten 55-gallon drums of hazardous waste, 2-4 of which were almost completely rusted.
3. A hazardous release is strongly suspected. The three TxDOT monitoring wells onsite sampled on February 13 and 16, 2009 have elevated chromium levels of up to 0.796 mg/L (Ref. 3, p. 3). This exceeds the critical PCL for total chromium, 0.10 mg/L (Ref. 3, p.3).
6. The TCEQ San Antonio Region Office Enforcement Division performed Compliance Investigations July 27, 2007 and May 1, 2009 (Ref. 2, p. 1-40). The Enforcement Division proposed that the three monitoring wells onsite and the three nearest ones offsite be sampled (Ref. 4, p. 1).

5 PATHWAY ASSESSMENT

The potential pathways for human and environmental receptors (targets) evaluated for this site screening include air, soil, surface water, and groundwater.

5.1 Ground Water Pathway

There are three monitoring wells located onsite (Ref. 3, p. 11; Appendix D Photograph 20). Sampling results of monitoring wells onsite and adjacent to the Site from February 13 and 16, 2009, show the groundwater gradient to be towards the south-southwest from the Site (Ref. 3, p. 6). The depth of the wells is unknown.

Three TxDOT monitoring wells are located adjacent to the Site. One is on the north side of I-10 outside the Site fence, one is on the south side of the overpass, and one is in the TxDOT ROW next to the railroad tracks (Ref. 3, p. 11, 32 - 33; Appendix B). TxDOT MW-1 and MW-2 are both 26 feet deep (Ref. 3, p. 34- 35). The depth of the remaining well is unknown.

The monitoring wells discussed above are all installed within the Quaternary Alluvium Formation, which consists of up to 45 feet of silt, sand and gravel that unconformably overlies the Navarro Clay in the site area (Ref. 6, p. 12; Ref. 8, p. 1-2). The alluvium is a shallow groundwater source of limited quantity, although no use of this zone was found within four miles of the site (Ref. 6, p. 12; Ref 5). The alluvium is, however, hydraulically connected to local streams that empty into the San Antonio River, and therefore could transmit contamination to those water bodies (Ref. 6, p. 12).

The Edwards aquifer-Balcones Fault Zone (BFZ; Ref. 6, p. 1-15) is the next groundwater zone beneath the site at a depth of between 948-1475 feet (Ref. 8, p. 1-2). The aquifer is confined at its upper boundary by the Del Rio Clay in the BFZ, resulting in the groundwater being under

artesian conditions in the area. The Edwards is the only drinking water source for the population of the City of San Antonio (Ref. 5, p. 14, 15, 18).

Wells within a ¼-mile radius and a ½-mile radius are all industrial (N; Ref. 5, p. 18), plugged or destroyed (G; Ref. 5, p. 18), or unused (U; Ref. 5, p. 18). Public water supply (PWS) wells appear within a 1-mile radius on the Texas Water Development Board (TWDB) Driller's Report (Ref. 5, p. 18). Appendix C shows other PWS wells, which are not in the TWDB Driller's Report, within a ¼-mile radius from the Site. There are seven SAWS PWS wells approximately ¾-mile from the site (Ref. 5, p. 20-21). Groundwater is also used for recreation, irrigation, and commercial use (Ref. 5, p. 6, 9, 12).

San Antonio uses a ¼-mile radius around each well as a wellhead protection area (Ref 9, p. 1). There are several PWS wells within a ¼- mile radius around the site (Appendix C), so it is strongly suspected that the Site is within a wellhead protection area.

5.2 Soil Pathway

During the February 24, 2010 site visit, the TCEQ did not observe any soil staining at the plating facility portion of the Site. However, staining was observed on concrete bricks that made up the northern wall both inside and outside the Metal/ Paint Stripping Area of the Site as well as on the concrete floor of the same area (Appendix D Photographs 11, 12, and 18). Caustic precipitate was observed on the outer rims of the caustic acid tank (Appendix D Photograph 2). No stressed vegetation was observed. No contamination was observed outside of the property boundaries (Appendix E).

The nearest residential area is across Roosevelt Street approximately 250 feet away from the Site. Astro Plating is accessible from Roosevelt Street via a gated alleyway, which was open at the time of the site visit. The gate surrounds the facility property (Appendix D Photograph 18).

5.3 Surface Water Pathway

The nearest surface water body is the San Antonio River, less than ¼-mile west, and approximately ½ mile south of the site. The site is not in a floodplain (Ref. 10, p. 1).

The owner, Mr. Salinas, said that when it rains, water accumulates in front of his business and eventually drains away south of I-10 (Appendix E p. 1-2). The topography of the Site is relatively flat, and the nearest depression is the River (Appendix A; Appendix E, p. 2). Therefore, the probable port of entry (PPE) of surface water runoff to the water body is south-southwest of the site into the San Antonio River. There is also a slight linear depression to the east of the Site (Appendix C)

No commercial fisheries or drinking water intakes reportedly exist along the TDL, although the San Antonio River is used for recreational fishing by the public within the TDL (Ref. 11, p. 2). No qualifying wetlands are associated with the water bodies within the TDL (Ref. 12, p. 1-4). There is no surface water intake in the TDL. The nearest surface water intake is the Medina River, approximately 10 miles south-southeast from the site (Ref. 13, p. 1).

The Missions National Park is bordered by the San Antonio River within the TDL and qualifies as a sensitive environment (Appendix C).

5.4 Air Pathway

There have been no recorded complaints from citizens regarding potential air releases. The nearest residence is approximately 250 feet away from the Site (Appendix B). The nearest school is approximately 3,850 feet away (Appendix B). No commercial agriculture, commercial silviculture, or major or designated recreation areas are present within ½ mile of the Site (Appendix B).

6 REFERENCES

1. U.S. Environmental Protection Agency. *Improving Site Assessment: Pre-CERCLIS Screening Assessments,* EPA-540-F-98-039; OSWER 9375.2-11FS; PB98-963310; October 1999. 4 pages.
2. Texas Commission on Environmental Quality. *Investigation Report Astro Plating Inc.* July 23, 2007. 40 pages.
3. Extra Environmental Inc. *Letters to Mr. Daniel Salinas and Sample Results from February 13-16, 2009.* July 17, 2008, April 28, 2009; Texas Water Well Drillers Advisory Council. *State of Texas Well Report.* September 1995. 35 pages.
4. Texas Commission on Environmental Quality. *Central Registry IHW Corrective Action Solid Waste Registration 37656.* Accessed March 31, 2010. 2 pages.
5. Texas Water Development Board. *Texas Department of Licensing and Regulation's State of Texas Well Report Submission and Retrieval System.* Accessed March 4, 2010; Texas Commission on Environmental Quality. *Integrated Water Utilities Database.* 21 pages.
6. Texas Water Development Board. *Carbonate Geology and Hydrology of the Edwards Aquifer in the San Antonio Area, Texas.* November 1986. 15 pages.
7. Texas Board of Water Engineers. *Bulletin 591: Ground-water Geology of Bexar County, Texas.* October 1959. 7 pages.
8. Texas Department of Water Resources. *Water Well Report.* Accessed May 25, 2010. 2 pages.
9. Loftus, Susy, Texas Commission on Environmental Quality to David Terry, Texas Commission on Environmental Quality. *Telephone memo March 13, 2003.* Accessed March 31, 2010. 1 page.
10. Federal Emergency Management Agency. *Flood Insurance Rate Map (FIRM) Bexar County, Texas and Incorporated Areas.* Panel 496 of 900. June 18, 1997. 1 page.
11. Loftus, Susy, Texas Commission on Environmental Quality to Steve Lusk, San Antonio River Authority and James Oliver, Missions National Park. *Telephone memo May 6 and May 8, 2003.* Accessed April 1, 2010. 2 pages.

12. National Wetlands Inventory. *Texas Wetlands data extraction.* January 22, 2010. 4 pages.

13. Texas Commission on Environmental Quality. *Source Water Assessment Viewer, Surface Water Intakes, San Antonio, TX.* April 5, 2010. 1 page.

REFERENCE 1

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | EPA-540-F-98-039 OSWER 9375.2-11FS PB98-963310 October 1999

Improving Site Assessment: Pre-CERCLIS Screening Assessments

Office of Emergency and Remedial Response
Site Assessment Team

Quick Reference Guidance Series

ABSTRACT

Pre-CERCLIS screening is a review of information on potential Superfund sites to determine whether the site should be entered into EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). Pre-CERCLIS screening is an initial low-cost look at potential sites to ensure that uncontaminated sites or sites ineligible under CERCLA are not unnecessarily entered into CERCLIS for further Superfund-financed assessment activities. This guidance document establishes minimum requirements for conducting pre-CERCLIS screening assessments and supplements existing pre-CERCLIS screening guidance.

BACKGROUND

All sites brought to the Agency's attention should be screened before we enter them into CERCLIS (OERR Directive # 9200.4-05, *Pre-CERCLIS Screening Guidance*, September 30, 1996)[1]. Pre-CERCLIS screening is the process of reviewing data on a potential site to determine whether it should be entered into CERCLIS for further evaluation. EPA is required to further assess risks to human health and the environment posed by sites entered into CERCLIS and to determine whether Federal response action (e.g., removal action, remedial action, oversight) is warranted. Pre-CERCLIS screening minimizes the number of sites unnecessarily entered into CERCLIS by providing a cost efficient mechanism for screening sites.

The pre-CERCLIS screening process begins when you are informed of a new site by a phone call or referral from State, Tribal or other Federal agency staff. The designated site investigator (regional, State, or Tribal staff or contractor) will complete the attached *Pre-CERCLIS Screening Assessment Checklist/Decision Form* (Attachment A), or equivalent documentation, to provide site information on deciding whether entry of the site into CERCLIS is warranted. If equivalent documentation is used, it must address the information requested in Attachment A. Only enter sites that require further Superfund assessment/response into CERCLIS. Information about sites deemed inappropriate for CERCLIS entry should be maintained for possible future reference and retrieval to avoid duplication of effort.

WHY USE PRE-CERCLIS SCREENING?

Pre-CERCLIS screening prevents unnecessary entry of sites into CERCLIS (e.g., uncontaminated sites, sites ineligible under CERCLA, or sites not requiring Federal Superfund response actions). Federal Agencies and States conducting CERCLA site assessments should consult with the EPA Regional Office prior to initiating Pre-CERCLIS screening to ensure that sufficient data will be collected to make an appropriate decision about the site.

HOW WILL PRE-CERCLIS SCREENING BE IMPLEMENTED?

The standard procedures for implementing pre-CERCLIS screening activities are presented below.

Who Will Fund Pre-CERCLIS Activities?
EPA Headquarters provides funding to EPA Regions for Superfund site assessment activities through an Advice of Allowance (AOA) as described in the Superfund Program Implementation Manual. These funds may be used to conduct pre-CERCLIS screening work; however, Regions need to balance the amount of funds used for pre-CERCLIS screenings with funding needs for other site assessment activities.

You may implement pre-CERCLIS screening activities through three primary mechanisms:
(1) Funding States and Tribes through site or multi-site assessment cooperative agreements;
(2) Funding Federal contractors (e.g., through START contracts); and
(3) Using EPA regional staff.

EPA regions should specify pre-CERCLIS screening activities in the statements of work associated with site/multi-site assessment cooperative agreements and with Federal contract work assignments as appropriate.

What Are Regional Staff Responsibilities?
Regional site assessment staff are responsible for reviewing screening reports for completeness and for ensuring that appropriate sites are entered into CERCLIS. A completed *Pre-CERCLIS Screening Assessment Checklist/Decision Form* (see Attachment A) or equivalent documentation as referenced above can serve as a final report for a site. The decision to enter or not enter a site into CERCLIS should be based on current information. If new information becomes available on a site that was not entered, you may reconsider the decision.

Site investigators should collect enough data to complete the *Pre-CERCLIS Screening Assessment Checklist/Decision Form* (see Attachment A). From the time of initial notification of a potential site, the site investigator should review the information to evaluate the need for additional assessment and entry into CERCLIS. See specific information requirements identified in the checklist. If more site information is available, the site investigator should examine the information at this time. The information collection/screening process is normally limited to one or two days. If the site is placed in CERCLIS, EPA will use the gathered information in the next step of the site evaluation (e.g., Preliminary Assessment (PA)[2], Abbreviated Preliminary Assessment (APA)[3], or Combined PA/SI[4]).

What Are The Screening Criteria?
To make a CERCLIS entry decision, site investigators need to gather enough data to address the screening criteria below. These criteria are primarily based on OERR Directive # 9200.4-05.

A site should not be entered into CERCLIS if:

- The site is currently in CERCLIS, or has been removed from CERCLIS and no new data warrant CERCLIS entry. Determine whether the site has previously been evaluated under the Federal Superfund Program to avoid entering a duplicate site record into CERCLIS. Check CERCLIS and archive data for previous entries of a site using site name, location, and site identification number data.

  Note: Sites already in CERCLIS with no work started may warrant CERCLIS screening as part of an APA. (See the guidance document titled, *Improving Site Assessment: Abbreviated Preliminary Assessments*[3] for more information on conducting APAs.)

- The site and some contaminants are subject to certain limitations based on definitions in CERCLA. This includes cases where the release is:
  (1) Of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found;
  (2) From products that are part of the structure of, and result in exposure within, residential buildings or business or community structures; or
  (3) Into public or private drinking water supplies due to deterioration of the system through ordinary use.

- A State or Tribal remediation program is involved in response at a site that is in the process of a final clean-up (e.g., a State Superfund program, State voluntary clean-up program, and State or local Brownfields programs).

  During the screening process, a file search of other Agency programs eliminates sites where other programs are actively involved. Based on the search of the geographical location of the site and the site name, conduct the search using current databases or telephone calls to staff of other potentially involved programs. You, in consultation with State and Tribal program representatives, are responsible for determining whether another program is actively involved with the site.

  When another program with sufficient investigation, enforcement, and remediation resources is actively

involved with a site, postpone a decision on CERCLIS entry until all actions have been completed. EPA is responsible for determining if the actions are sufficient and will then determine whether any further Superfund involvement is warranted.

- The hazardous substance release at the site is regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or covered by the Nuclear Regulatory Commission (NRC), and Uranium Mill Tailings Radiation Control Act (UMTRCA), see CERCLA Section 101(22).

  If entry into CERCLIS is not warranted due to statutory exclusion, the site data should be sent to the appropriate Federal and State/Tribal program for possible future follow-up. You should confirm notification of sites referred to other programs.

- The hazardous substance release at the site is deferred by policy considerations (e.g., RCRA Corrective Action). Refer to the *Regional QC Guidance for NPL Candidate Sites*[5] for more examples.

  The site investigator should, at a minimum, search other current EPA data sets using site identification data (name and location) to determine whether the site is already being addressed by other authorities.

  The NPL/RCRA deferral policy states that sites should not be placed on the NPL if they can be addressed under RCRA Subtitle C corrective action authorities. However, according to the NPL/RCRA policies published June 10, 1986 (51 FR 21057), June 24, 1988 (53 FR 23978), and October 4, 1989 (54 FR 41000), facilities that are subject to RCRA Subtitle C may be listed on the NPL when corrective action is unlikely to succeed or occur promptly, as in the following situations: (1) inability to finance, (2) unwillingness/loss of authorization to operate, (3) unwillingness/case-by-case determination, (4) converters, non- or late filers, (5) pre-HSWA (Hazardous and Solid Waste Amendments) permittees, and (6) when not all of the release from the facility is covered by RCRA corrective action.

- Site data are insufficient to determine CERCLIS entry (i.e., based on potentially unreliable sources or with no information to support the presence of hazardous substances or CERCLA-eligible pollutants and contaminants).

  If you are presented with incomplete pre-CERCLIS screening information or with what appears to be unreliable data for a site, you should identify the data deficiencies and forward these data needs to the site investigator for further data collection. Refer to the attached pre-CERCLIS screening checklist for minimum required site information. When it is not feasible to obtain all the information to complete the checklist, use professional judgement when deciding to place a site in CERCLIS.

- There is sufficient documentation that clearly demonstrates that there is no potential for a release that could cause adverse environmental or human health impacts (e.g., comprehensive remedial investigation equivalent data showing no release above applicable or relevant and appropriate requirements (ARARs), completed removal action of all sources and releases, documentation showing that no hazardous substance releases have occurred, or a completed EPA approved risk assessment showing no risk).

You should communicate CERCLIS site entry decisions to States and Tribes on a regular basis.

Does Pre-CERCLIS Screening Apply To Citizen-Petitioned Sites?

Citizen-petitioned sites are eligible for pre-CERCLIS screening assessments and must meet the same criteria. According to Section 105(d) of CERCLA, EPA must perform a PA or provide an explanation for why the PA was not appropriate within 12 months of receiving the petition. The *Pre-CERCLIS Screening Assessment Checklist/Decision Form* (see Attachment A) or equivalent documentation may be used to support the decision to enter the site into CERCLIS and perform a PA or to explain to the petitioner why a PA is not appropriate.

How Will Information be Managed?

See the Superfund Program Implementation Manual for procedures on managing pre-CERCLIS screening information in the Superfund data system.

REFERENCES

1. U.S. Environmental Protection Agency, September 1996. *Pre-CERCLIS Screening Guidance*. Office of Solid Waste and Emergency Response. Directive # 9200.4-05.

2. U.S. Environmental Protection Agency, September 1991. *Guidance for Performing Preliminary Assessments Under CERCLA*. Office of Solid Waste and Emergency Response. Publication 9345.0-01A.

3. U.S. Environmental Protection Agency, October 1999. Quick Reference Guidance Series - *Improving Site Assessment: Abbreviated Preliminary Assessments*. Publication OSWER 9375.2-09FS.

4. U.S. Environmental Protection Agency, October 1999. Quick Reference Guidance Series - *Improving Site Assessment: Combined PA/SI Assessments.* Publication OSWER 9375.2-10FS.

5. U.S. Environmental Protection Agency, December 1991. *Regional Quality Control Guidance for NPL Candidate Sites.* Office of Solid Waste and Emergency Response. Publication 9345.1-08.

FOR MORE INFORMATION

For more information on pre-CERCLIS screening activities, please contact Randy Hippen at EPA Headquarters, phone (703) 603-8829 or e-mail at *hippen.randy@epa.gov*.

REFERENCE 2

N/A

Texas Commission on Environmental Quality
Investigation Report
ASTRO PLATING INC
CN600262935

ASTRO PLATING SAN ANTONIO
RN100551985

Investigation # 568385 **Incident #**

Investigator: JORGE SALAZAR

Site Classification
SMALL QUANTITY GENERATOR

Conducted: 07/23/2007 -- 07/23/2007

SIC Code: 3471
NAIC Code: 332813

Program(s): INDUSTRIAL AND HAZARDOUS WASTE GENERATION

Investigation Type : Compliance Investigation

Location : 915 Roosevelt, San Antonio, TX

Additional ID(s) : TXD044773265
37656

Address: 915 ROOSEVELT AVE; SAN ANTONIO, TX 78210

Activity Type : REGION 13 - SAN ANTONIO
IHWSQG - CEI of small quantity generator

Principal(s) :

Role	Name
RESPONDENT	ASTRO PLATING INC

Contact(s) :

Role	Title	Name	Phone	
Participated in Investigation	PRESIDENT / ENVIRONMENTAL MANAGER	MR DANIEL SALINAS	Work	(210) 533-7126
Regulated Entity Contact	PRESIDENT / ENVIRONMENTAL MANAGER	MR DANIEL SALINAS	Work	(210) 533-7126
Regulated Entity Mail Contact	PRESIDENT / ENVIRONMENTAL MANAGER	MR DANIEL SALINAS	Fax Work	(210) 533-7128 (210) 533-7126

Other Staff Member(s) :

Role	Name
QA Reviewer	ABIGAIL POWER
Supervisor	ABIGAIL POWER
Supervisor	HENRY KARNEI JR

Associated Check List

Checklist Name	Unit Name
IHW GENERIC OTHER ISSUES OR VIOLATIONS (20 ITEMS)	July 23, 2007 CEI #3
IHW GENERIC OTHER ISSUES OR VIOLATIONS (20 ITEMS)	July 23, 2007 CEI
IHW GENERIC OTHER ISSUES OR VIOLATIONS (20 ITEMS)	July 23, 2007 CEI # 2

Investigation Comments :

020001

INTRODUCTION

On July 23, 2007, an Industrial and Hazardous Waste Compliance Evaluation Investigation (CEI) was conducted at Astro Plating by Texas Commission on Environmental Quality (TCEQ) San Antonio, Region 13 representative Jorge Salazar. Astro Plating (facility) is located at 915 Roosevelt Ave., San Antonio, Bexar County, Texas (Attachment 1). The facility was represented by Mr. Daniel Salinas, President. This inspection was unannounced.

This investigation was requested by Mr. Matt Beeter, Attorney, Office of the Attorney General to determine the compliance with Agreed Order, TNRCC Docket No. 1998-1071-IHW-E.

During the investigation, the writer gave Mr. Daniel Salinas the brochure entitled: "TCEQ Has Inspected Your Business". Mr. Salinas' business card is included with the report as Attachment 12. Mr. Salinas was informed that the site appeared to be in the same condition as was documented during the January 2006 CEI. An exit interview was not conducted at the end of the site investigation. Mr. Salinas was informed that TCEQ Exit Interview Forms will be faxed to him within a few days. Three TCEQ Exit Interview Forms were completed and faxed to Mr. Salinas on July 27, 2007 (Attachment 15). The Exit Interview Forms outlined fourteen violations: 1) failure to cease, suffer, allow or permit the collection, handling, storage, processing or disposal of industrial solid waste 2) failure to properly complete industrial and hazardous waste manifests; 3) failure to maintain complete and correct records of all hazardous and industrial solid waste activities; 4) failure to properly label hazardous waste tanks and containers; 5) failure to use accurate 5-digit Texas Waste Classification Code on all manifests and the generator's Solid Waste Registration Number on all manifests; 6) failure to submit a complete notification of all solid waste management activities conducted at the facility; 7) failure of the facility's contingency plan to describe the actions taken by personnel in response to emergency situations; 8) failure to maintain training documents on file for workers who handle hazardous waste; 9) failure to submit to the executive director (ED) copies of hazardous waste determinations for all wastes managed on site. 10) failure to submit certification compliance to indicate that the tanks on site have met tank requirements; 11) failure to submit to the ED for review & approval with modifications, a closure plan to address the incomplete closure described in Finding of Fact No. 3 of Agreed Order, TNRCC Docket No. 1998-1071-IHW-E; 12) failure to implement & submit to the ED a copy of the facility's Source Reduction & Waste Minimization Plan; 13) failure to submit a report which summarizes the finding of a site investigation to the ED for review and approval; and 14) failure to retain onsite copies of Land Disposal Restrictions notices that had been submitted with off-site waste shipments for treatment and disposal.

GENERAL FACILITY AND WASTE PROCESS INFORMATION

The facility conducts repairs, straightening, and electroplating of metal parts, primarily automotive bumpers, as custom orders and for retail sale. First, old plating, paint, and metal finishes are stripped from the parts using acid and caustic solutions and baths, after which they are rinsed and allowed to drip dry. The parts are then manually worked to remove imperfections (dents, scrapes, etc.) utilizing blunt force and grinding. Finally, the parts are finished utilizing chromium, nickel, copper cyanide, gold, and brass electroplating processes. A copy of the facility's process Flow Chart is included in this report as Attachment 11 to illustrate the facility's plating processes. A copy of the facility's Notice of Registration (NOR) is included as Attachment 2.

Dust created from the grinding and buffing of parts is swept from the Grinding/Buffer room floor and collected in buckets and drums. When the buckets are filled, the contents are emptied into the facility general trash dumpster. The dust has been analytically determined to be a Class 2 waste, however the facility chose to classify the waste as a Class 1.

Wire used to suspend metal parts in solutions and baths is accumulated in a drum in the Electroplating Bath area. The wire, along with other process scrap metal, is then transported to a scrap metal recycler. During the July 2007 CEI, the writer did not observe a designated accumulation drum.

Dragout, rinse overspray, and other waste streams are collected in four containment systems.

Three of the containment systems are located in the Electroplating Bath area and lie directly beneath the elevated baths. These systems are joined and consist of concrete floors and curbs. The fourth containment system is located in the Metal/Paint Stripping area and is comprised of a sloped concrete floor with a partial cinder block wall. As waste streams are captured by the containment systems, they are drained and collected into an integrated sump. Once the sump reaches a preset capacity, an automatic pump is activated. The waste is then pumped to one of three storage tanks located in the Waste Treatment area. The stored waste is then periodically treated by filtration using a paper medium. Residual liquids are then collected into a fourth storage tank for later use as make-up water for the preparation process baths.

The paper filter medium, containing the treatment waste, and electroplating bath clean-out residues are accumulated in 55-gallon drums and/or cubic yard Gaylord boxes in the facility's container storage area (CSA).

BACKGROUND

Astro Plating was issued an Agreed Order on August 23, 2000 (Agreed Order, TNRCC Docket No. 1998-1071-IHW-E). Salinas and the facility initially paid seven thousand dollars ($7000.00) of the administrative penalty. The Agreed Order called for Salinas and the facility to pay fifteen thousand dollars ($15,000), in ten monthly installments, of a twenty two thousand dollar ($22,000) administrative penalty. The Agreed Order cited the facility with sixteen (16) violations of the Texas Water Code and state and federal solid waste rules and regulations. In addition, the Agreed Order called for the facility to undertake 18 technical requirements. A copy of Agreed Order, TNRCC Docket No. 1998-1071-IHW-E is included as Attachment 6. Seven previous Industrial and Hazardous Waste Compliance Evaluation Investigations have been conducted at this site from 1986 thru 2006 (1986, 1997, 1998, 1999, 2000, 2002 & 2006). See previous CEI reports for background information. This section of the report will document conditions since the last CEI report dated July 25, 2006 (CCEDS Investigation No. 451838).

ADDITIONAL INFORMATION

Site Inspection

The purpose of the investigation was to document the current conditions and determine if Astro Plating was complying with the August 23, 2000 Agreed Order. Photographs taken during this CEI are provided as Attachment 9; the writer's notes from this investigation are available as Attachment 8; copies of facility site maps are included as Attachment 10.

The writer arrived at Astro Plating at 9:05 AM. However, Mr. Daniel Salinas was not present. Mr. Salinas arrived at the facility at approximately 9:15 AM. A brief entrance meeting was conducted with Mr. Salinas to inform him of the type of investigation that would be conducted and briefly review the facility's NOR.

The facility consists of the Storage/Racking Area, Electroplating Area, Straightening/Welding Area, Polishing/Buffing Area, Wastewater Pretreatment Area, Metal/Paint Stripping Area, and Former Bumper Manufacturing Building.

Storage/Racking Area

The Storage/Racking Area is located between the facility's electroplating area and the facility's offices (Attachment 9, Photo No. 1). The area is used to store plated and unplated parts.

Electroplating Area

The Electroplating Area is comprised of various plating and rinse baths: heated metal cleaner tank; two rinse tanks; sulfuric acid tank; two acid rinse tanks; zinc plating tank (currently not in use); nickel plating tanks (one tank not in use); nickel rinse tanks; chrome dip/rinse tank; chrome electroplating tank (rinse into tank); chrome rinse tanks (not in use); copper cyanide electroplating tank; copper rinse tanks; zincate tank. The area additionally has a gold plating container and a brass plating drum and rinse drum.

During the site investigation, the writer observed a discharge of water from of the electroplating area that appears to be originating from the facility's metal cleaner tank (Attachment 9, Photo No. 5). At the base of the metal cleaner tank, the writer documented three 5-gallon containers full of caustic precipitant (Attachment 9, Photo No. 6). The trail of discharge water appears to be accumulating in a large area underneath the awning (Attachment 9, Photo No. 26 & 27).

The writer observed numerous 5-gallon buckets of nickel bath solution adjacent to the facility's nickel plating bath (Attachment 9, Photo No. 7). It was not apparent if the solutions were waste or product.

The electroplating area's secondary containment system appears to be in poor condition (Attachment 9, Photo No. 2 & 4). The concrete curbs appear to be degrading and allowing electroplating bath dragout waste to migrate from the containment area. Additionally, the writer noted dragout waste from the heated metal cleaner tank spilling into the containment area (Attachment 9, Photo No. 3).

Straightening/Welding Area
Straightening/Welding area is located between the facility's electroplating area and the facility's Polishing Area. The writer did not document any visible problems in this area.

Polishing/Buffing Area
Polishing/Buffing area is located between the facility's Straightening/Welding area and the facility's wastewater pretreatment area (Attachment 9, Photo No. 8). Grinding dust was observed being generated in this area.

Former Bumper Manufacturing Building
Former Bumper Manufacturing Building is located adjacent to the western property line. In the past, the building was used to manufacture steel truck bumpers. The building is currently used for additional storage. Astro Plating currently disposes of its Class 2 wastes in a waste dumpster serviced by Waste Management. The dumpster is located near the southwest corner of the property next to the former Bumper Manufacturing Building.

Wastewater Pretreatment Area
The facility's wastewater pretreatment area is located immediately adjacent to the metal/paint stripping area. The wastewater pretreatment area houses the facility's filtration paper media apparatus (Attachment 9, Photo No. 9) and three hazardous waste tanks. The writer documented approximately fifteen 10-gallon containers of unknown material being stored in this area (Attachment 9, Photo No. 10).

Metal/Paint Stripping Area
The facility's Metal/Paint Stripping Area is located at the west end of the facility's main building. The area contains a 1,000-gallon Muriatic Acid Tank (Attachment 9, Photo No. 19), 800 gallon Hot Caustic Tank (empty), Acid Rinse Tank, Caustic Rinse Tank (Attachment 9, Photo No. 11), caustic activator tank, a wastewater holding tank (hazardous waste tank) (Attachment 9, Photo No. 12) and a nitric acid tank (Attachment 9, Photo No. 18). Adjacent to the muriatic acid tank, the writer documented orange-brown stains on the secondary containment structure and bare ground outside of the secondary containment area (Attachment 9, Photo Nos. 20 & 21). The stains indicate that the discharges have occurred continually for a significant period of tine. The writer noted stains on the concrete floor that appear to have originated from the caustic activator tank (Attachment 9, Photo No. 17) and wastewater holding tank (Attachment 9, Photo Nos. 12). The writer, additionally, documented orange-brown stains and free liquid between the wastewater holding tank and nitric acid tank (Attachment 9, Photo No. 16). The stains on the concrete and the condition of the concrete indicate evidence of poor handling of hazardous wastes. The writer documented a container used to collect and store paint solids. At the base of the container, it appearing to have corroded to the point that paint solids are leaking from the base (Attachment 9, Photo No. 15). The writer observed a 55-gallon drum of product sulfuric acid (Attachment 9, Photo No. 13) and a 55-gallon drum of product hydrochloric acid (Attachment 9, Photo No. 14) being stored within the area.

The writer followed the discharge originating from the Metal/Paint Stripping Area outside of the building, and the visible staining was observed for approximately 20 feet (Attachment 9, Photo Nos. 23-25). At the rear of the Metal/Paint Stripping area, the writer documented an apparent discharge (Attachment 9, Photo No. 22).

Record Review

The NOR lists Astro Plating as a Small Quantity Generator (SQG). The EPA RCRAINFO Compliance Monitoring and Enforcement Violation Report lists the facility as a Small Quantity Generator of hazardous waste under EPA ID TXD044773265 (Attachment 3). The EPA RCRAINFO RCRA Site Detail Report lists the site as Astro Plating, with the initial notification date to the EPA on February 27, 1987 (Attachment 4). The report shows that there have been numerous IHW investigations conducted at the site.

A record search through the Bexar Appraisal District website lists the property owned by Astro Plating (Attachment 5). A review of the Texas Secretary of State (SOS) website lists Mr. Daniel Salinas as the Registered Agent, President, and Director of Astro Plating, Inc. (Attachment 6). The search listed Mr. Esidro Salinas as the Director, Treasurer, and Secretary for Astro Plating Inc.

Throughout the entire site investigation, Mr. Daniel Salinas stated that he is financially unable to conduct any clean-ups. Mr. Salinas additionally stated that if there are substantial fines related to this investigation that he would most likely file for bankruptcy.

During the record review portion of the investigation, the writer inquired if any changes or updates to the facility's waste determination documentation have been made since the January 2006 site investigation. Mr. Salinas stated no changes have been made since the last site visit. Based on Mr. Salinas' statement, the writer did not request copies of the waste determinations. The discrepancies discovered during the January 2006 CEI still remain. The waste determination documents provided during the January 2006 CEI were for ten waste streams. These waste determinations were prepared in 1999 by Forbes Environmental Engineering, Inc. on behalf of Astro Plating. A review of the waste determination documentation indicates the waste determinations were based on analytical data or process knowledge. The waste streams' waste codes did not correspond to any of the waste codes listed on the NOR. Seven of the ten provided waste determinations appear to meet descriptions listed of the NOR. One of the waste determinations (Dried Nickel, 00083191 & 96081131) does not match any of the waste streams listed on the NOR. The NOR lists one waste stream (00115091 - caustic soda sludge) that did not match any of the waste determinations provided.

The writer requested to review the facility's waste manifests for the past eighteen months. Astro Plating provided all the facility's hazardous waste manifests. The writer noted only one hazardous waste manifest (#3775988) since the last site investigation conducted on January 11, 2006. A copy of the requested hazardous waste manifest is included as Attachment 14. The manifest appeared to be completed properly with one notable exception. In section "I" of the manifest, the facility coded the waste being shipped with waste code 0001316H that is not listed on the NOR. The manifest had a copy of the appropriate LDR notice that had been submitted with off-site waste shipments for treatment and disposal.

During the investigation, the writer requested to review Astro Plating's past three years of annual waste summaries (AWS) to compare with manifests and the annual waste summaries received by the state. Astro Plating provided the 2004 and 2006 Annual Waste Summaries. Copies of the facility's Annual Waste Summaries for the years 2005 and 2006, generated from the TCEQ TRACS database, are provided as Attachment 13. The facility's 2006 AWS match the TCEQ report. The TCEQ 2005 report additionally listed "no detail records found". Astro Plating was unable to provide a copy of the 2005 Annual Waste Summary.

During the record review portion of the investigation, the writer inquired if any changes or updates to

the facility's Emergency Procedures and Contingency Plan have been made since the January 2006 site investigation. Mr. Salinas stated no changes have been made since the last site visit. Based on Mr. Salinas' statement, the writer did not request copies of the Emergency Procedures and Contingency Plan. The discrepancies discovered during the January 2006 CEI still remain. The Emergency Procedures and Contingency Plan provided during the January 2006 CEI had written content that appeared to adequately satisfy the requirements of the contingency and emergency plan regulations. The plan stated that the facility has notified local fire, police, and hospitals of the facility's operation and copies of the transmittals are included in the plan. However, the plan provided did not include these transmittals. Additionally, the plan stated that the plan will be reviewed and evaluated once every three years. The plan provided was dated July 2000.

Surrounding Land Use
The facility is located at 915 Roosevelt Ave., San Antonio, Bexar County, Texas. The surrounding land uses are commercial, industrial and residential. The site is served by San Antonio Water System public water and sewage systems. Drainage is to San Antonio River in the San Antonio River Basin Segment #1911 (Segment Identification Maps for Texas Rivers and Coastal Basins LP 85-01).

REVIEW OF THE AUGUST 23, 2000 AGREED ORDER (DOCKET NO. 1998-1071-IHW-E)

Ordering Provision 1.: Salinas and Astro are assessed an administrative penalty in the amount of one hundred sixty-seven thousand four hundred twenty dollars ($167, 420.00) for violations of the Tex. Water Code, the Tex. Health & Safety Code and the rules of the TNRCC. This is a penalty payable to and for the benefit of a governmental unit and is not compensation for actual pecuniary loss. Upon receipt by the TNRCC of payment in the amount of twenty-two thousand dollars ($22,000.00), the penalty shall be considered satisfied and paid in full. Salinas and Astro have paid seven thousand dollars ($7000.00) of the administrative penalty. The remaining fifteen thousand dollars ($15,000.00) shall be paid in 10 monthly installments of one thousand five hundred dollars ($1,500.00) each...If Salinas or Astro fail to timely and satisfactorily comply with any of the requirements, terms or conditions of the Agreed Order, the Executive Director may require Salinas and Astro to pay in full the entire administrative penalty upon demand.

Compliance Status with 1.: The July 25, 2006 CEI Report stated "a review of the TCEQ Penalty Payment database reflected that the facility has remitted the remaining fifteen thousand dollars ($15,000.00) of the remaining administrative penalty. The tenth and last monthly installment of one thousand five hundred dollars ($1,500.00) was received by the TNRCC on July 2, 2001. Astro Plating is in compliance with this ordering provision." However, based on the non-compliances documented during the January 11 & 13, 2006 CEI and July 23, 2007 site investigation, it is recommended that the ED consider requiring Mr. Salinas and Astro to pay in full the entire administrative penalty.

Ordering Provision 2.a.I.: Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: cease to cause, suffer, allow, or permit the collection, handling, storage, processing or disposal of industrial solid waste or municipal hazardous waste in violation of 30 Tex. Admin. Code 335.4 (relating to General Prohibitions) until such time as a permit or other authorization is obtained in accordance with 30 Tex. Admin. Code 335.2 (relating to Permit Required).

Compliance Status with 2.a.I.: During the July 23, 2007 site investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area. The discharges migrated on surface soils in a general north/northwest direction away from the facility building. The stains appeared yellow, brown, and green in color. The writer additionally noted dragout wastes (free liquid) generated in the facility electroplating area migrating from the secondary containment area onto the facility's operations unprotected concrete floor and out onto the bare ground in front of the

electroplating area. The majority of these discharges were also documented during the January 11 & 13, 2006 CEI. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.a.II.: Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: begin preparing manifests for shipment of hazardous waste in accordance with 30 Tex. Admin. Code 335.10 (relating to Recordkeeping and Annual Reporting Procedures applicable to Generators).

Compliance Status with 2.a.II: During the July 23, 2007 site investigation, only one hazardous waste manifest (# 3775988) was available for review since the January 11 & 13, 2007 CEI. The manifest failed to have the correct state waste code. Additionally, a review of the hazardous waste manifests for the past three years, one additional manifest #214193 failed to have: the TCEQ SWR No.; the transporter's state ID number; the state waste codes, and the facility's generator's EPA ID Number. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.a.III.: Salinas and Astro shall undertake the following technical requirement Immediately upon the effective date of a Commission Order: begin maintaining complete and correct records of all hazardous and industrial solid waste activities at the facility, in accordance with 30 Tex. Admin. Code 335.9 (relating to Recordkeeping and Annual Reporting Procedures Applicable to Generators).

Compliance Status with 2.a.III.: During the July 23, 2007 site investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Salinas provided copies of the facility Annual Waste Summaries for the years 2004 & 2006. A review of the TRACS database indicated that the facility's 2006 AWS matches the TCEQ report. The facility's 2004 AWS listed 1600 lbs of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". Mr. Salinas was unable to provide the 2005 AWS. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility. It appears Astro Plating is not in compliance with all the requirements of this ordering provision.

Ordering Provision 2.a.IV.: Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: properly label and cover all hazardous waste containers at the facility, in accordance with 30 Tex. Admin. Code 335.69 and 40 CFR 262.34 (relating to Accumulation Time).

Compliance Status with 2.a.IV.: During the January 11 & 13, 2006 CEI, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer did not observe any drums or other containers of waste. During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drum containing an unknown substance. Astro Plating appears not to be in compliance with all the requirements of this ordering provision.

Ordering Provision 2.a.V.: Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: commence using accurate and consistent eight digit Texas Waste Classification codes and the generator's Industrial SWR number on all manifests and other documentation relating to accumulation, shipping, disposal and reporting, in accordance with 30 Tex. Admin. Code 335.502 (relating to Conversion to New Waste Notification and Classification System).

Compliance Status with 2.a.V.: During the July 23, 2007 site investigation, the writer reviewed the facility's hazardous waste manifests. The facility only had one manifest since the January 11 & 13, 2006 CEI. The manifest (# 3775988) failed to have the same corresponding eight digit Texas Waste

Classification codes as was listed on the facility's NOR. Over the past three years, only one other manifest fits the time frame. That manifest (#214193) failed to have the eight digit Texas Waste Classification codes. The two manifests described the wastes as Chromium Solid Waste (D007) & (F006) and Nickel/Aluminum Plating Waste (F006) respectively. A review of the NOR lists the active waste code as 0010504H. Sample analysis, conducted during the September 2002 CEI, indicated that these wastes contained levels of cyanide. The waste code should have the form code reflecting the presence of cyanide. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.b.I.: Within 30 days after the effective date of a Commission order, submit a complete notification of all solid waste management activities (i.e., notification information on each waste and waste management units) conducted at the facility, in accordance with 30 Tex. Admin. Code 335.6 (relating to Notification Requirements).

Compliance Status with 2.b.I.: During the July 23, 2007 Site Investigation, Astro Plating was again using waste code 0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of this investigation. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.b.II.: Within 30 days after the effective date of a Commission order, achieve compliance with Preparedness and Prevention requirements in accordance with 30 Tex. Admin. Code 335.69(f)(4) and 40 CFR Part 265 Subpart C (relating to Preparedness and Prevention).

Compliance Status with 2.b.II.: During the July 23, 2007 Site Investigation, and the January 11 & 13, 2006 CEI, the writer observed portions of the concrete berm walls, that comprised part of the containment/sump system beneath the electroplating baths, deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and appear unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had internal site alarms and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would support these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.b.III.: Within 30 days after the effective date of a Commission order, provide training to facility personnel in accordance with 30 Tex. Admin. Code 335.112(a)(1) and 40 CFR 265.16 (relating to Personnel Training).

Compliance Status with 2.b.III.: The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On January 14, 2000, the TNRCC Region 13 office received an ECA report, dated December 1999, from the facility. Section 5.1 of the ECA report, labeled "Employee Training Program - Chemical Hazards", described the training regimen of facility personnel who manage

hazardous waste. The section contained instructions on new employee training (i.e., facility tour, MSDS books, PPE and spill equipment), the use of spill equipment (i.e., fire, extinguisher, absorbents, cut-off systems, communications and alarms), response actions to fire or explosion, response actions to groundwater incidents, and shut down operations of the facility. On June 11, 2002, the TNRCC Region 13 office received documentation submitted by Geostrata Environmental Consultants, Inc., (GEC) on behalf of AP. The documentation included "Hazardous Communication 29 CFR 1910.1200 Training" certificates, dated May 28, 2002, for Daniel Salinas, Esidro Salinas, Baleriano Martinez, Jesus Gonzales, Daniel Martinez, Tomas Costilla, and Daniel Salinas, Jr., all employees at the facility. However, during the investigation, the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee." During the July 23, 2007 Site Investigation and January 11 & 13, 2007 CEI, Astro Plating has been unable to provide any training records. The observations made during the December 19, 2002 CEI Report continued to occur. Based on past and current observations, Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.b.IV.: Within 30 days after the effective date of a Commission order, submit to the Executive Director copies of hazardous waste determinations for all wastes managed on site, in accordance with 30 Tex. Admin. Code 335.62 and 335.504, and 40 CFR 262.11.

Compliance Status with 2.b.IV.: During the January 11 & 13, 2007 CEI, Mr. Daniel Salinas provided copies of hazardous waste determinations for waste streams generated at the facility. The hazardous waste determinations were prepared by Forbes Environmental Engineering, Inc., on behalf of Astro Plating dated October 12, 1999. The waste streams provide included plant office refuse (00019032), plant production refuse (00029012), empty containers (00033082), buffer/grinding room floor dust (00043192), welding room floor dust (00053192), scrap metal (00063072), scrap wire (00073073), dried nickel (00083191), waste water sludge (0009504H), and process wastewater (0010113H). During the July 23, 2007 site investigation, the writer asked Mr. Salinas if Astro Plating has made any updates or changes to its waste determinations documents. Mr. Salinas stated that neither he nor Astro Plating has made any updates or changes to its waste determination documents. Based on past observations and Mr. Salinas' statement, Astro Plating has not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.b.V.: Within 30 days after the effective date of a Commission order, submit a certification of compliance with 30 Tex. Admin. Code 335.112(a)(9) (relating to Tank Systems). For tanks which are upgraded for hazardous waste storage, the certification of compliance must document that the relevant portions of 40 CFR 265.191 through 265.193 have been completed. For incompatible wastes, the certification of compliance must document that 40 CFR 265.199(a) is being complied with. For tank inspections, the certification of compliance must document that the relevant portions of 40 CFR 265.195 are being complied with.

Compliance Status with 2.b.V: The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally,

Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.c.I.: Within 60 days after the effective date of a Commission order, submit to the Executive Director, for review and approval, or approval with modifications, a Closure Plan to address the incomplete closure identified in Finding of Fact no. 3.b. The Closure Plan shall address the applicable requirements of 30 Tex. Admin. Code 335.8, 335.112(a)(6) and (9), and 30 Tex. Admin. Code Chapter 335, Subchapter S. The Closure Plan shall describe procedures for achieving and verifying removal of all wastes (including waste that may have been considered product prior to being discarded) from units at the facility, and shall also address any contaminated media surrounding the units at the facility. In addition, the Closure Plan shall include a schedule of activities, with the completion of closure not to exceed one hundred eighty (180) days from the Executive Director's approval of the plan, and a provision for the submittal of a certification of the completion of final closure and a final closure report.

Compliance Status with 2.c.I.: The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On February 22, 2001, the TNRCC Region 13 office received a Closure Plan for Astro Plating, Inc. (submitted by FEE and dated October 2000). The Closure Plan was submitted to address the removal of waste and contaminated media from the facility. On December 10, 2001, a letter was sent from the TNRCC Corrective Action Section to AP. In the letter, the Corrective Action Section stated that they had reviewed and could not approve the submitted Closure Plan. A listing of comments to the Closure Plan was included in the letter. A revised Closure Plan to address the comments from the TNRCC Corrective Action Section was not submitted by the facility for the Executive Director's written approval". On July 1, 2004, the TCEQ Corrective Action Section requested a response from Astro Plating to the December 10, 2001 Comments Letter. The July 1, 2004 letter additionally requested a remediation status update. On October 28, 2004, the TCEQ Corrective Action Section issued a "Second Request for Remediation Status" letter to Astro Plating. The letter gave Astro Plating 30 days to submit a response. As of the date of this report, Astro Plating has not responded to the TCEQ Corrective Action Section. Based on these actions, Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.c.II.: Upon receipt of written approval by the Executive Director of the Closure Plan, implement the Closure Plan, including any requested modifications, in accordance with the schedule contained in the approved Closure Plan.

Current Compliance Status 2.c.II.: The submitted Closure Plan, dated October 2000, or any subsequent modifications to the plan, was never given written approval by the Executive Director. Thus, the Closure Plan was never implemented by the facility. Based on this action, Astro Plating is in compliance by default with this ordering provision.

Ordering Provision 2.c.III.: Within 60 days after the effective date of a Commission order, initiate an investigation (the "Site Investigation") to determine the source(s) and to characterize the nature and extent, direction, rate of movement, volume, composition, and concentration of chromium contamination in soil and groundwater at the facility, in accordance with 30 Tex. Admin. Code Chapter 335, Subchapters A and S (relating to Risk Reduction Standards).

Compliance Status with 2.c.III.: During the September 17 & 19, 2002 site investigation, it was noted that the facility did initiate a Site Investigation by drilling four borings (B-1, B-2, B-3, and B-4) at the facility on October 14, 1999, and October 19, 1999. The purpose of this work was to collect soil samples from different depths and develop the borings into groundwater monitoring wells if possible. Borings B-1, B-2, and B-4 were developed into groundwater monitoring wells MW-1, MW-2, and MW-3 respectively. Boring B-3 was intended to represent an upgradient point at the site; however, the boring did not produce any groundwater and was later plugged. Groundwater samples were later collected from the three, on-site monitoring wells on October 26, 1999. Since these investigations, no further remedial investigations have been conducted at the site. Based on these actions, it appears Astro Plating was in compliance with this ordering provision.

Ordering Provision 2.c.IV.: Within 60 days after the effective date of a Commission order, implement and submit to the Executive Director a copy of the facility's Source Reduction and Waste Minimization Plan, in accordance with 30 Tex. Admin. Code 335.474 (relating to Source Reduction and Waste Minimization Plans).

Compliance Status with 2.c.IV.: During the July 23, 2007 Site Investigation, and past investigations, the writer and the past investigator requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan. Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.c.V.: Within 180 days after the effective date of this Agreed Order, complete the Site Investigation and submit a report which summarizes the findings of the Site Investigation (the "Site Investigation Report") to the Executive Director for review and approval. The Site Investigation Report shall include a proposal for corrective action, in accordance with 30 Tex. Admin. Code Chapter 335, Subchapters A and S or other applicable guidance approved by the Executive Director. Upon review, possible modification, and approval by the Executive Director, implement the proposal in accordance with the approved implementation schedule.

Compliance Status with 2.c.V.: Initially, during the September 17 & 19, 2002 CEI, it was noted that the facility did not complete and submit a report which summarized the findings of the Site Investigation. Subsequently, no proposal for corrective action was submitted by the facility to the Executive Director for review, modification, and/or approval. As of the date of this report, Astro Plating has not completed and submitted a report summarizing the findings of the Site Investigation. Based on these actions, Astro Plating is not in compliance with this ordering provision.

Ordering Provision 2.d.: Submit all correspondence, reports, and documentation required by Ordering Provisions a, b, and c, to: Randy Norwood, Coordinator, Enforcement Division, MC 134, Texas Natural Resource Conservation Commission, P.O. Box 13087, Austin, Texas 78711-3087 with a copy to: Henry Kamei, Jr., Manager, Waste Section, San Antonio Regional Office, Texas Natural Resource Conservation Commission, 140 Heimer Road, Suite 360, San Antonio, Texas 78232-5042.

Compliance Status with 2.d.: It appears that the facility had submitted all correspondence, reports, and documentation that had been prepared or completed in regards to Ordering Provisions a, b, and c to the Commission. Astro Plating is in compliance with this ordering provision.

SUMMARY OF OUTSTANDING ALLEGED VIOLATIONS

1. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.a.I. (Texas Water Code 26.121 and 30 Tex. Admin. Code 335.4)

During the July 23, 2007 site investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area. The discharges migrated on surface soils, in a general north/northwest direction, away from the facility building. The writer additionally noted dragout wastes (free liquid), generated in the facility electroplating area, migrating from the secondary containment area onto the facility's unprotected concrete floor and out onto the bare ground in front of the electroplating area. The majority of these discharges were documented during the January 11 & 13, 2006 CEI.

2. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.a.II (30 Tex Admin. Code 335.10

During the July 23, 2007 site investigation, only one hazardous waste manifest (# 3775988) was available for review since the January 11 & 13, 2006 CEI. The manifest failed to have the correct state waste code. Additionally, a review of the hazardous waste manifests for the past three years

Indicate one additional manifest, #214193, failed to have: the TCEQ SWR No.; the transporter's state ID number; the state waste codes, and the facility's generator's EPA ID Number.

3. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.a.III.[30 Tex. Admin. Code 335.9(a)(1) and 335.9(a)(2)]

During the July 23, 2007 site investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Salinas provided copies of the facility Annual Waste Summaries for the years 2004 & 2006. A review of the TRACS database indicated that the facility's 2006 AWS matches the TCEQ report. The facility's 2004 AWS listed 1600 lbs of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". Mr. Salinas was unable to provide the 2005 AWS. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

4. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.a.IV. [30 Tex. Admin. Code 335.69(a) and 40 CFR 262.34(a)]

During the January 11 & 13, 2006 CEI, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer did not observe any drums or other containers of waste. During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drums containing an unknown substance.

5. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.a.V. [30 Tex. Admin. Code 335.515(a)]

During the July 23, 2007 site investigation, the writer reviewed the facility's hazardous waste manifests. The facility only had one manifest since the January 11 & 13, 2006 CEI. The manifest (# 3775988) failed to have the same corresponding eight digit Texas Waste Classification codes as was listed on the facility's NOR. Over the past three years, only one other manifest fits was prepared in this time frame. That manifest (#214193) failed to have the eight digit Texas Waste Classification code. The two manifests described the wastes as Chromium Solid Waste (D007) & (F006) and Nickel/Aluminum Plating Waste (F006) respectively. A review of the NOR lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that these wastes generated at the site contained cyanide. The waste code should have the form code reflecting the presence of cyanide.

6. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.b.I. [30 Tex. Admin. Code 335.6(c)]

During the July 23, 2007 Site Investigation, Astro Plating was again using waste code 0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR

as SWMUs at the time of this investigation.

7. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.b.II. [30 Tex. Admin. Code 335.69(f)(4) and 40 CFR Part 265 Subpart C]

During the July 23, 2007 Site Investigation, and January 11 & 13, 2006 CEI, the writer observed portions of the concrete berm walls, that comprised part of the containment/sump system beneath the electroplating baths, deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and appear unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal site alarm and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would support these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility. Astro Plating is not in compliance with this ordering provision.

8. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.b.III. [30 Tex. Admin. Code 335.112(a)(1) and 40 CFR 265.16]

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On January 14, 2000, the TNRCC Region 13 office received an ECA report, dated December 1999, from the facility. Section 5.1 of the ECA report, labeled "Employee Training Program - Chemical Hazards", described the training regimen of facility personnel who manage hazardous waste. The section contained instructions on new employee training (i.e., facility tour, MSDS books, PPE and spill equipment), the use of spill equipment (i.e., fire, extinguisher, absorbents, cut-off systems, communications and alarms), response actions to fire or explosion, response actions to groundwater incidents, and shut down operations of the facility. On June 11, 2002, the TNRCC Region 13 office received documentation submitted by Geostrata Environmental Consultants, Inc., (GEC) on behalf of AP. The documentation included "Hazardous Communication 29 CFR 1910.1200 Training" certificates, dated May 28, 2002, for Daniel Salinas, Esidro Salinas, Baleriano Martinez, Jesus Gonzales, Daniel Martinez, Tomas Costilla, and Daniel Salinas, Jr., all employees at the facility. However, during the investigation, the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee." During the July 23, 2007 Site Investigation and January 11 & 13, 2007 CEI, Astro Plating has been unable to provide any training records. The observations made during the December 19, 2002 CEI Report continued to occur.

9. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.b.IV. [30 Tex. Admin. Code 335.112(a)(1) and 40 CFR 265.16]

During the January 11 & 13, 2006 CEI, Mr. Daniel Salinas provided copies of hazardous waste determinations for waste streams generated at the facility. The hazardous waste determinations were prepared by Forbes Environmental Engineering, Inc., on behalf of Astro Plating dated October 12, 1999. The waste streams provided include plant office refuse (00019032), plant production refuse (00029012), empty containers (00033082), buffer/grinding room floor dust (00043192), welding room floor dust (00053192), scrap metal (00063072), scrap wire (00073073), dried nickel (00083191), waste water sludge (0009504H), and process wastewater (0010113H). During the July 23, 2007 site investigation, the writer asked Mr. Salinas if Astro Plating has made any updates or changes to its waste determinations documents. Mr. Salinas stated that neither he nor Astro Plating has made

any updates or changes to its waste determination documents. Based on past observations and Mr. Salinas' statement, Astro Plating has not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues.

10. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.b.V. [30 Tex. Admin. Code 335.112(a)(9) and 40 CFR 265.191-193, 265.195, and 265.199(a)]

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

11. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.c.I.

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On February 22, 2001, the TNRCC Region 13 office received a Closure Plan for Astro Plating, Inc. (submitted by FEE and dated October 2000). The Closure Plan was submitted to address the removal of waste and contaminated media from the facility. On December 10, 2001, a letter was sent from the TNRCC Corrective Action Section to AP. In the letter, the Corrective Action Section stated that they had reviewed and could not approve the submitted Closure Plan. A listing of comments to the Closure Plan was included in the letter. A revised Closure Plan to address the comments from the TNRCC Corrective Action Section was not submitted by the facility for the Executive Director's written approval". On July 1, 2004, the TCEQ Corrective Action Section requested a response from Astro Plating to the December 10, 2001 Comments Letter. The July 1, 2004 letter additionally requested a remediation status update. On October 28, 2004 the TCEQ Corrective Action Section issued a "Second Request for Remediation Status" letter to Astro Plating. The letter gave Astro Plating 30 days to submit a response. As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

12. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.c.IV. [30 Tex. Admin. Code 335.474 and 335.479]

During the July 23, 2007 Site Investigation, and past investigations, the writer and the past investigator requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan.

13. Agreed Order, TNRCC Docket No. 1998-1071-IHW-E, Ordering Provision 2.c.V.

Initially during the September 17 & 19, 2002 CEI, it was noted that the facility did not complete and submit a report which summarized the findings of the Site Investigation. Subsequently, no proposal for corrective action was submitted by the facility to Executive Director for review, modification, and/or approval. As of the date of this report, Astro Plating has not completed and submitted a report summarizing the findings of the Site Investigation. Based on these actions, Astro Plating has failed to comply with Agreed Order Docket No. 1998-1071-IHW-E Ordering Provision 2.c.V.

14. 30 Tex. Admin. Code 335.431(c) and 40 CFR 268.7(a)(8) - Recordkeeping and Reporting: Land Disposal Restrictions (LDR)

During the record review portion of the July 23, 2007 Site Investigation, Astro Plating had only one

hazardous waste manifest (#3775988) generated since the January 11 & 13, 2006 CEI. The manifest did have an LDR notice with the manifest. During the January 2006 CEI, the facility only had one LDR (Manifest #214193) notice that had been submitted with off-site waste shipments for treatment and disposal. However, Astro Plating did not have any other LDR notices associated with different state waste codes listed on waste manifests.

CONCLUSION

This inspection was conducted at Astro Plating whose hazardous waste generator status is identified as a Small Quantity Generator of hazardous waste. Additionally, the facility was evaluated to determine if Astro Plating's compliance with the August 23, 2000 Agreed Order (Docket No. 1998-1071-IHW-E). Astro Plating was in violation of fourteen state and federal solid waste regulations and ordering provisions of the August 23, 2000 Agreed Order (Docket No. 1998-1071-IHW-E). A copy of this report will be forwarded to Thomas Greimel, TCEQ Enforcement Section, for evaluation. A NOE letter will not be sent at this time. Any correspondence to the facility will be made by the Office of the Attorney General.

NOE Date: 8/9/2007

OUTSTANDING ALLEGED VIOLATION(S)
ASSOCIATED TO A NOTICE OF ENFORCEMENT

Track No: 13999 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.a.I.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: cease to cause, suffer, allow, or permit the collection, handling, storage, processing or disposal of industrial solid waste or municipal hazardous waste in violation of 30 Tex. Admin. Code 335.4 (relating to General Prohibitions) until such time as a permit or other authorization is obtained in accordance with 30 Tex. Admin. Code 335.2 (relating to Permit Required)."

During the investigation, surface staining and free liquids, indicative of waste discharges, were observed emanating from the Metal/Paint Stripping area, located on the western end of the facility building, and migrating on surface soils in a general north/northwest direction away from the facility building. The stains and liquids appeared to originate from corrosive stripping baths and containers maintained in the Metal/Paint Stripping area and appeared either yellow, brown, or green in color. A measure of the pH conducted on the discharged liquids utilizing litmus papers indicated a range of 4.5 to 5.5.

Investigation: 451838 Comment Date: 05/11/2006

During the investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area and migrated on surface soils in a general north/northwest direction away from the facility building. The stains appeared yellow, brown, and green in color. The writer additionally noted dragout wastes (free liquid) generated in the facility electroplating area migrating from the secondary containment area onto the facility's operations unprotected concrete floor.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to

originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area. The discharges migrated on surface soils, in a general north/northwest direction, away from the facility building. The writer additionally noted dragout wastes (free liquid), generated in the facility electroplating area, migrating from the secondary containment area onto the facility's unprotected concrete floor and out onto the bare ground in front of the electroplating area. The majority of these discharges were documented during the January 11 & 13, 2006 CEI.

Track No: 14038 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.a.III.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: begin maintaining complete and correct records of all hazardous and industrial solid waste activities at the facility, in accordance with 30 Tex. Admin. Code 335.9 (relating to Recordkeeping and Annual Reporting Procedures Applicable to Generators)."

During the investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Daniel Salinas, General Manager, stated that records were not being maintained of the amounts of waste generated, stored, or treated at the facility. In addition, the facility did not accurately report waste generation amounts on Annual Waste Summary reports for the years of 2001 and 1999.

Investigation: 451838 Comment Date: 05/11/2006

During the investigation, it was requested of the facility to provide records of the amounts of waste generated, stored, and/or treated at the facility. Mr. Salinas only provided copies of the facility Annual Waste Summaries (AWS) for the years 2002, 2003, & 2004. A review of the TRACS database indicated that the facility's 2002 and 2003 AWS match the TCEQ reports. The facility's 2004 AWS listed 1600 lbs. of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". At the time of the investigation, Astro Plating was not required to have submitted the 2005 Annual Waste Summary. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Salinas provided copies of the facility Annual Waste Summaries for the years 2004 & 2006. A review of the TRACS database indicated that the facility's 2006 AWS matches the TCEQ report. The facility's 2004 AWS listed 1600 lbs of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". Mr. Salinas was unable to provide the 2005 AWS. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

Track No: 14041 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.a.IV.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: properly label and cover all hazardous waste containers at the facility, in accordance with 30 Tex. Admin. Code 335.69 and 40 CFR 262.34 (relating to Accumulation Time).

During the investigation, four, 55-gallon drums of hazardous waste were observed open and unlabeled in the northwest corner of the Metal/Paint Stripping area of the facility. Mr. Daniel Salinas, General Manager, stated that three of the drums contained residues from plating baths and the other drum contained waste generated from the waste treatment unit. Samples were collected from the drums and submitted for total 8 RCRA metals analysis, with TCLP analysis performed if warranted, total nickel analysis, with TCLP analysis if warranted, and cyanide analysis. The analytical report indicated that one of the drums exhibited hazardous levels for chromium (D007), two of the drums exhibited Class 1 levels for nickel, and all of the drums reflected levels for cyanide. Based on the analytical report and statements made by Mr. Salinas, three drums of the drums were determined to contain F008, listed hazardous waste (listed electroplating bath residues with cyanides) and the remaining drum was determined to contain D007 (characteristic for chromium) and F006 hazardous waste. Also, a large tub containing F006 treatment waste was observed to be open and unlabeled in the Waste Treatment area of the facility. Additionally, another 55-gallon drum, approximately half full and containing what appeared to be waste, was observed to be open and unlabeled on the western side of the Electroplating Bath area. Finally, none of the four, on-site hazardous waste storage tanks were labeled with the words "hazardous waste".

Investigation: 451838 Comment Date: 05/11/2006

During the investigation, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer was unable to observe any drums or other containers of waste.

Investigation: 568385 Comment Date: 08/03/2007

During the January 11 & 13, 2006 CEI, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer did not observe any drums or other containers of waste. During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drums containing an unknown substance.

Track No: 14046 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E
Ordering Provision 2.a.V.

Alleged Violation:
Investigation: 11700 Comment Date: 12/19/2002

"Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: commence using accurate and consistent eight digit Texas Waste Classification codes and the generator's Industrial SWR number on all

manifests and other documentation relating to accumulation, shipping, disposal and reporting, in accordance with 30 Tex. Admin. Code 335.502 (relating to Conversion to New Waste Notification and Classification System)."

During the investigation, the facility transferred hazardous waste contained in four drums located in the Metal/Paint Stripping area into two, Gaylord cubic yard boxes and marked them with the waste code 0001316H, a waste code that does not accurately describe the waste. In Appendix G (Form Codes) of the "Guidelines for the Classification and Coding of Industrial and Hazardous Waste" (TCEQ publication document RG-22), form code "316" is found under the column of "inorganic solids" and is described as "Other metal salts/chemicals". Sampling analysis conducted upon the waste contained in the drums determined that the waste contained levels of cyanide which form code "316" does not address.

Investigation: 451838 Comment Date: 05/11/2006

During the investigation, the writer reviewed the facility's hazardous waste manifests. The facility had only two manifests for the past three years. The two manifests (#214193 and #202837) failed to have the eight digit Texas Waste Classification codes. The two manifests described the wastes as Nickel/Aluminum Plating Waste (F006) and Plating Waste (F006) respectively. A review of the Notice of Registration (NOR) lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that the wastes generated at the site contained levels of cyanide. The waste code should have the form code reflecting the presence of cyanide.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer reviewed the facility's hazardous waste manifests. The facility only had one manifest since the January 11 & 13, 2006 CEI. The manifest (# 3775988) failed to have the same corresponding eight digit Texas Waste Classification codes as was listed on the facility's NOR. Over the past three years, only one other manifest fits was prepared in this time frame. That manifest (#214193) failed to have the eight digit Texas Waste Classification code. The two manifests described the wastes as Chromium Solid Waste (D007) & (F006) and Nickel/Aluminum Plating Waste (F006) respectively. A review of the NOR lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that these wastes generated at the site contained cyanide. The waste code should have the form code reflecting the presence of cyanide.

Track No: 14051 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.b.I.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 30 days after the effective date of a Commission order, submit a complete notification of all solid waste management activities (i.e., notification information on each waste and waste management units) conducted at the facility, in accordance with 30 Tex. Admin. Code 335.6 (relating to Notification Requirements)."

During the investigation, it was noted that the facility has failed to notify the TCEQ of the generation, accumulation, shipping and disposal of the facility assigned waste code 0001316H. In addition, spent filter bags for the nickel plating process were observed in the northwest corner of the Metal/Paint Stripping area of the facility. These filter bags were not listed on the facility NOR as a generated waste stream. Also, the waste streams from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR as generated waste streams. Finally, the facility maintains four storage tanks and

four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility NOR as SWMUs at the time of the investigation.

Investigation: 451838 Comment Date: 05/11/2006

During a past investigation, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of the January 2006 CEI, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR as generated waste streams. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of the investigation.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, Astro Plating was again using waste code 0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of this investigation.

Track No: 14053 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.b.II.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 30 days after the effective date of a Commission order, achieve compliance with Preparedness and Prevention requirements in accordance with 30 Tex. Admin. Code 335.69(f)(4) and 40 CFR Part 265 Subpart C (relating to Preparedness and Prevention)."

During the investigation, concrete berm walls that comprised part of the containment/sump system beneath the plating baths were observed. Part of the berm wall located on the south side of the containment structure had deteriorated to such a point that it would have been unable to contain any sudden release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and also would have been unable to contain any sudden release from this area. The facility conducted repairs to both of these containment structures during the investigation. Also, no internal communication or alarm system for emergency instruction could be identified. Additionally, no agreement with an emergency response contractor to respond to a release at the facility could be identified. Finally, no documentation was submitted that would indicate arrangements had been made to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

Investigation: 451838 Comment Date: 05/11/2006

During the investigation, the writer observed portions of the concrete berm walls that comprised part of the containment/sump system beneath the electroplating baths deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and also would have been unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal site alarms and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire, and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would back up these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and January 11 & 13, 2006 CEI, the writer observed portions of the concrete berm walls, that comprised part of the containment/sump system beneath the electroplating baths, deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and appear unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal site alarm and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would support these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility. Astro Plating is not in compliance with this ordering provision.

Track No: 14054 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.b.III.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 30 days after the effective date of a Commission order, provide training to facility personnel in accordance with 30 Tex. Admin. Code 335.112(a)(1) and 40 CFR 265.16 (relating to Personnel Training)."

During the investigation, it was noted that the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee.

Investigation: 451838 Comment Date: 05/11/2006

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On January 14, 2000, the TNRCC Region 13 office received an ECA report, dated December 1999, from the facility. Section 5.1 of the ECA report, labeled "Employee Training Program - Chemical Hazards", described the training regimen of facility personnel who manage hazardous waste. The section contained instructions on new employee training (i.e., facility tour, MSDS books, PPE and spill equipment), the use of spill equipment (i.e., fire, extinguisher, absorbents, cut-off systems, communications and alarms), response actions to fire or explosion, response actions to groundwater incidents, and shut down operations of the facility. On June 11, 2002, the TNRCC Region 13 office received documentation submitted by Geostrata Environmental Consultants, Inc., (GEC) on behalf of Astro Plating (AP). The documentation included "Hazardous Communication 29 CFR 1910.1200 Training" certificates, dated May 28, 2002, for Daniel Salinas, Esidro Salinas, Baleriano Martinez, Jesus Gonzales, Daniel Martinez, Tomas Costilla, and Daniel Salinas, Jr., all employees at the facility. However, during the investigation, the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee." During the January 11 & 13 CEI, Astro Plating was unable to provide any training records. The observations made on the December 19, 2002 CEI Report continued to occur. Based on past and current observations, Astro Plating is not in compliance with this ordering provision.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation and January 11 & 13, 2007 CEI, Astro Plating has been unable to provide any training records. The observations made during the December 19, 2002 CEI Report continued to occur.

Track No: 14085 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.b.IV.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 30 days after the effective date of a Commission order, submit to the Executive Director copies of hazardous waste determinations for all wastes managed on site, in accordance with 30 Tex. Admin. Code 335.62 and 335.504, and 40 CFR 262.11."

During the investigation, it was noted that the facility had failed to complete and submit written waste determinations for waste streams generated from the electroplating bath processes and electroplating bath residues.

Investigation: 451838 Comment Date: 05/11/2006

During the site investigation, Mr. Daniel Salinas provided copies of hazardous waste determinations for waste streams generated at the facility. The hazardous waste determinations were prepared by Forbes Environmental Engineering, Inc. (FEE), on behalf of Astro Plating dated October 12, 1999. The waste streams provided included plant office refuse (00019032), plant production refuse (00029012), empty containers (00033082), buffer/grinding room floor dust (00043192), welding room floor dust (00053192), scrap metal (00063072), scrap wire (00073073), dried nickel (00083191), waste water sludge (0009504H), and process wastewater (0010113H). However, Astro Plating had not completed written waste determinations for the waste streams generated from the

electroplating bath processes and electroplating bath residues.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer asked Mr. Salinas if Astro Plating has made any updates or changes to its waste determinations documents. Mr. Salinas stated that neither he nor Astro Plating has made any updates or changes to its waste determination documents. Based on past observations and Mr. Salinas' statement, Astro Plating has not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues.

Track No: 14087 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.b.V.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 30 days after the effective date of a Commission order, submit a certification of compliance with 30 Tex. Admin. Code 335.112(a)(9)(relating to Tank Systems). For tanks which are upgraded for hazardous waste storage, the certification of compliance must document that the relevant portions of 40 CFR 265.191 through 265.193 have been completed. For incompatible wastes, the certification of compliance must document that 40 CFR 265.199(a) is being complied with. For tank inspections, the certification of compliance must document that the relevant portions of 40 CFR 265.195 are being complied with."

During the investigation, the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken any steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid waste with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections).

Investigation: 451838 Comment Date: 05/11/2006

As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Investigation: 568385 Comment Date: 08/03/2007

As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 14089 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.c.I.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 60 days after the effective date of a Commission order, submit to the Executive Director, for review and approval, or approval with modifications, a Closure Plan to address the incomplete closure identified in Finding of Fact no. 3.b. The Closure Plan shall address the applicable requirements of 30 Tex. Admin. Code 335.8, 335.112(a)(6) and (9), and 30 Tex. Admin. Code Chapter 335, Subchapter S. The Closure Plan shall describe procedures for achieving and verifying removal of all wastes (including waste that may have been considered product prior to being discarded) from units at the facility, and shall also address any contaminated media surrounding the units at the facility. In addition , the Closure Plan shall include a schedule of activities, with the completion of closure not to exceed one hundred eighty (180) days from the Executive Director's approval of the plan, and a provision for the submittal of a certification of the completion of final closure and a final closure report."

During the investigation, it was noted that the facility had failed to submit a revised Closure Plan for the Executive Director's written approval after the original submittal was rejected for approval by the Commission.

Investigation: 451838 Comment Date: 05/11/2006

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On February 22, 2001, the TNRCC Region 13 office received a Closure Plan for Astro Plating, Inc. (submitted by FEE and dated October 2000). The Closure Plan was submitted to address the removal of waste and contaminated media from the facility. On December 10, 2001, a letter was sent from the TNRCC Corrective Action Section to AP. In the letter, the Corrective Action Section stated that they had reviewed and could not approve the submitted Closure Plan. A listing of comments to the Closure Plan was included in the letter. A revised Closure Plan to address the comments from the TNRCC Corrective Action Section was not submitted by the facility for the Executive Director's written approval". On July 1, 2004, the TCEQ Corrective Action Section requested a response from Astro Plating to the December 10, 2001 Comments Letter. The July 1, 2004 letter additionally requested a remediation status update. On October 28, 2004 the TCEQ Corrective Action Section issued a "Second Request for Remediation Status" letter to Astro Plating. The letter gave Astro Plating 30 days to submit a response. As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

Investigation: 568385 Comment Date: 08/03/2007

As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

Track No: 14092 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.c.IV.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 60 days after the effective date of a Commission order, implement and submit to the Executive Director a copy of the facility's Source Reduction and Waste Minimization Plan, in accordance with 30 Tex. Admin. Code 335.474 (relating to Source Reduction and Waste Minimization Plans)."

During the investigation, it was noted that the facility had not submitted or did not present a Source Reduction and Waste Minimization Plan.

Investigation: 451838 Comment Date: 05/11/2006

During the September 17 & 19, 2002 CEI and the January11 & 13, 2006 CEI, the investigators requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and past investigations, the writer and the past investigator requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan.

Track No: 14093 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101

SWR# 37656, 1998-1071-IHW-E

Ordering Provision 2.c.V.

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"Within 180 days after the effective date of this Agreed Order, complete the Site Investigation and submit a report which summarizes the findings of the Site Investigation (the "Site Investigation Report") to the Executive Director for review and approval. The Site Investigation Report shall include a proposal for corrective action, in accordance with 30 Tex. Admin. Code Chapter 335, Subchapters A and S or other applicable guidance approved by the Executive Director. Upon review, possible modification, and approval by the Executive Director, implement the proposal in accordance with the approved implementation schedule."

During the investigation, it was noted that the facility did not complete and submit a report which summarized the findings of the Site Investigation. Subsequently, no proposal for corrective action was submitted by the facility to Executive Director for review, modification, and/or approval.

Investigation: 451838 Comment Date: 05/11/2006

As of the date of this report, Astro Plating has not completed and submitted a report summarizing the findings of the Site Investigation. Based on these actions, Astro Plating has failed to comply with Agreed Order Docket No. 1998-1071-IHW-E Ordering Provision 2.c.V.

Investigation: 568385 Comment Date: 08/03/2007

As of the date of this report, Astro Plating has not completed and submitted a report summarizing the findings of the Site Investigation. Based on these actions, Astro Plating has failed to comply with Agreed Order Docket No. 1998-1071-IHW-E Ordering Provision 2.c.V.

Track No: 14096 **Compliance Due Date: To Be Determined**

30 TAC Chapter 335.431(c)

Alleged Violation:

Investigation: 11700 Comment Date: 12/19/2002

"(8) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under 40 CFR 261.2 through 261.6, or exempted from Subtitle C regulation, subsequent to the point of generation."

At the time of the investigation, the facility had not retained on-site any copies of LDR notices that had been submitted with off-site waste shipments for treatment and disposal.

Investigation: 451838 Comment Date: 05/11/2006

At the time of the investigation, the facility only had one LDR (Manifest #214193) notice that had been submitted with off-site waste shipments for treatment and disposal. However, Astro Plating did not have any other LDR notices associated with different state waste codes listed on waste manifests.

Investigation: 568385 Comment Date: 08/03/2007

During the record review portion of the July 23, 2007 Site Investigation, Astro Plating had only one hazardous waste manifest (#3775988) generated since the January 11 & 13, 2006 CEI. The manifest did have an LDR notice with the manifest. During the January 2006 CEI, the facility only had one LDR (Manifest #214193) notice that had been submitted with off-site waste shipments for treatment and disposal. However, Astro Plating did not have any other LDR notices associated with different state waste codes listed on waste manifests.

Track No: 87456 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.62
40 CFR Chapter 262.11

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to conduct hazardous waste determination on four waste streams.

Investigation: 568385 Comment Date: 08/03/2007

During the January 11 & 13, 2006 CEI, Mr. Daniel Salinas provided copies of hazardous waste determinations for waste streams generated at the facility. The hazardous waste determinations were prepared by Forbes Environmental Engineering, Inc., on behalf of Astro Plating dated October 12, 1999. The waste streams provided include plant office refuse (00019032), plant production refuse (00029012), empty containers (00033082), buffer/grinding room floor dust (00043192), welding room floor dust (00053192), scrap metal (00063072), scrap wire (00073073), dried nickel (00083191), waste water sludge (0009504H), and process wastewater (0010113H). During the July 23, 2007 site investigation, the writer asked Mr. Salinas if Astro Plating has made any updates or changes to its waste determinations documents. Mr. Salinas stated that neither he nor Astro Plating has made any updates or changes to its waste determination documents. Based on past observations and Mr. Salinas' statement, Astro Plating has not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues.

Track No: 87467 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.2(b)
30 TAC Chapter 335.6(c)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to list, and evidence disposal of, hazardous waste on the Facility's Notice of Registration.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, Astro Plating was again using waste code 0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment

generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of this investigation.

Track No: 88428 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.4
TWC Chapter 26.121

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Causing and allowing discharges into or adjacent to any water in the State.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area. The discharges migrated on surface soils, in a general north/northwest direction, away from the facility building. The writer additionally noted dragout wastes (free liquid), generated in the facility electroplating area, migrating from the secondary containment area onto the facility's unprotected concrete floor and out onto the bare ground in front of the electroplating area. The majority of these discharges were documented during the January 11 & 13, 2006 CEI.

Track No: 88431 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.69(a)(1)(B)
30 TAC Chapter 335.69(a)(1)(D)(ii)
30 TAC Chapter 335.69(a)(3)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to comply with the 90-day hazardous waste accumulation time for large quanity generators.

Investigation: 568385 Comment Date: 08/03/2007

During the January 11 & 13, 2006 CEI, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer did not observe any drums or other containers of waste. During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drums containing an unknown substance.

Track No: 88462 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.112

Alleged Violation:

Investigation: 145877 Comment Date: 07/24/2003

Failed to comply with site closure requirements

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On February 22, 2001, the TNRCC Region 13 office received a Closure Plan for Astro Plating, Inc. (submitted by FEE and dated October 2000). The Closure Plan was submitted to address the removal of waste and contaminated media from the facility. On December 10, 2001, a letter was sent from the TNRCC Corrective Action Section to AP. In the letter, the Corrective Action Section stated that they had reviewed and could not approve the submitted Closure Plan. A listing of comments to the Closure Plan was included in the letter. A revised Closure Plan to address the comments from the TNRCC Corrective Action Section was not submitted by the facility for the Executive Director's written approval". On July 1, 2004, the TCEQ Corrective Action Section requested a response from Astro Plating to the December 10, 2001 Comments Letter. The July 1, 2004 letter additionally requested a remediation status update. On October 28, 2004 the TCEQ Corrective Action Section issued a "Second Request for Remediation Status" letter to Astro Plating. The letter gave Astro Plating 30 days to submit a response. As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

Track No: 88466 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.6(c)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to update the Facility 's Notice of Registration to add or remove carious units and waste streams.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, Astro Plating was again using waste code 0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of this investigation.

Track No: 88471 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.10
40 CFR Chapter 262.20(a)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to submitted complete hazardous waste manifests.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, only one hazardous waste manifest (# 3775988) was available for review since the January 11 & 13, 2006 CEI. The manifest failed to have

the correct state waste code. Additionally, a review of the hazardous waste manifests for the past three years indicate one additional manifest, #214193, failed to have: the TCEQ SWR No.; the transporter's state ID number; the state waste codes, and the facility's generator's EPA ID Number.

Track No: 88478 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.9

Alleged Violation:

Investigation: 145877 Comment Date: 07/24/2003

Failed to maintain hazadous waste records applicable to hazardous waste generators.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Salinas provided copies of the facility Annual Waste Summaries for the years 2004 & 2006. A review of the TRACS database indicated that the facility's 2006 AWS matches the TCEQ report. The facility's 2004 AWS listed 1600 lbs of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". Mr. Salinas was unable to provide the 2005 AWS. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

Track No: 88486 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.69
40 CFR Chapter 265.51(a)
40 CFR Chapter 265.52(e)

Alleged Violation:

Investigation: 145877 Comment Date: 07/24/2003

Failed to comply with requirements for emergency preparedness.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and January 11 & 13, 2006 CEI, the writer observed portions of the concrete berm walls, that comprised part of the containment/sump system beneath the electroplating baths, deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and appear unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal site alarm and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would support these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility. Astro Plating is not in compliance with this ordering provision.

Track No: 88490 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.112
40 CFR Chapter 265.16

Alleged Violation:

Investigation: 145877 Comment Date: 07/24/2003

Failed to provide hazardous waste training programs to Facility personnel and failed to keep records of the Facility.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On January 14, 2000, the TNRCC Region 13 office received an ECA report, dated December 1999, from the facility. Section 5.1 of the ECA report, labeled "Employee Training Program - Chemical Hazards", described the training regimen of facility personnel who manage hazardous waste. The section contained instructions on new employee training (i.e., facility tour, MSDS books, PPE and spill equipment), the use of spill equipment (i.e., fire, extinguisher, absorbents, cut-off systems, communications and alarms), response actions to fire or explosion, response actions to groundwater incidents, and shut down operations of the facility. On June 11, 2002, the TNRCC Region 13 office received documentation submitted by Geostrata Environmental Consultants, Inc., (GEC) on behalf of AP. The documentation included "Hazardous Communication 29 CFR 1910.1200 Training" certificates, dated May 28, 2002, for Daniel Salinas, Esidro Salinas, Baleriano Martinez, Jesus Gonzales, Daniel Martinez, Tomas Costilla, and Daniel Salinas, Jr., all employees at the facility. However, during the investigation, the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee." During the July 23, 2007 Site Investigation and January 11 & 13, 2007 CEI, Astro Plating has been unable to provide any training records. The observations made during the December 19, 2002 CEI Report continued to occur.

Track No: 88504 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.69(a)(3)
30 TAC Chapter 335.69(d)(1)
30 TAC Chapter 335.69(d)(2)
40 CFR Chapter 262.34(c)
40 CFR Chapter 265.173(a)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failuedto label and cover a hazardous waste storge drum.

Investigation: 568385 Comment Date: 08/03/2007

During the January 11 & 13, 2006 CEI, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer did not observe any drums or other containers of waste. During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drums containing an unknown substance.

Track No: 88507 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.112
40 CFR Chapter 265.192

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to comply with tank system standards.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 88519 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.112
40 CFR Chapter 265.199(a)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to take precautions to prevent the reaction of incompatible wastes in the Facility tank systems.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 88522 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.112

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to comply with tank system inspection requirements.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to

incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 88529 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.474
30 TAC Chapter 335.479

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to submit a source reduction and waste minimization plan for the Facility.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and past investigations, the writer and the past investigator requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan.

Track No: 88539 **Compliance Due Date: 02/24/2002**

30 TAC Chapter 335.502(b)(2)

Alleged Violation:
Investigation: 145877 Comment Date: 07/24/2003

Failed to update the facility's six digit waste codes to eight digit waste codes.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer reviewed the facility's hazardous waste manifests. The facility only had one manifest since the January 11 & 13, 2006 CEI. The manifest (# 3775988) failed to have the same corresponding eight digit Texas Waste Classification codes as was listed on the facility's NOR. Over the past three years, only one other manifest fits was prepared in this time frame. That manifest (#214193) failed to have the eight digit Texas Waste Classification code. The two manifests described the wastes as Chromium Solid Waste (D007) & (F006) and Nickel/Aluminum Plating Waste (F006) respectively. A review of the NOR lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that these wastes generated at the site contained cyanide. The waste code should have the form code reflecting the presence of cyanide.

Track No: 100042 **Compliance Due Date: To Be Determined**

Alleged Violation:
Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to conduct hazardous waste determination on four waste streams.
Failure to conduct hazardous waste determination on four waste streams.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to conduct hazardous waste determination on four waste streams.
Failure to conduct hazardous waste determination on four waste streams.

Investigation: 451838 Comment Date: 06/27/2006

During the site investigation, Mr. Daniel Salinas provided copies of hazardous waste determinations for waste streams generated at the facility. The hazardous waste determinations were prepared by Forbes Environmental Engineering, Inc. (FEE), on behalf

of Astro Plating dated October 12, 1999. The waste streams provided included plant office refuse (00019032), plant production refuse (00029012), empty containers (00033082), buffer/grinding room floor dust (00043192), welding room floor dust (00053192), scrap metal (00063072), scrap wire (00073073), dried nickel (00083191), waste water sludge (0009504H), and process wastewater (0010113H). However, Astro Plating had not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer asked Mr. Salinas if Astro Plating has made any updates or changes to its waste determinations documents. Mr. Salinas stated that neither he nor Astro Plating has made any updates or changes to its waste determination documents. Based on past observations and Mr. Salinas' statement, Astro Plating has not completed written waste determinations for the waste streams generated from the electroplating bath processes and electroplating bath residues.

Track No: 100044 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

By causing and allowing discharges into or adjacent to any water in the State.
By causing and allowing discharges into or adjacent to any water in the State.

Investigation: IE0001562002032 Comment Date: 08/06/2003

By causing and allowing discharges into or adjacent to any water in the State.
By causing and allowing discharges into or adjacent to any water in the State.

Investigation: 451838 Comment Date: 06/27/2006

During the investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area and migrated on surface soils in a general north/northwest direction away from the facility building. The stains appeared yellow, brown, and green in color. The writer additionally noted dragout wastes (free liquid) generated in the facility electroplating area migrating from the secondary containment area onto the facility's operations unprotected concrete floor.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer observed orange-brown staining and free liquids, indicative of waste discharges, originating from the Metal/Paint Stripping area located on the western end of the facility building. The stains and liquids appeared to originate from the muriatic acid tank, the nitric acid tank, the hot caustic tank, and various rinse tanks maintained in the Metal/Paint Stripping area. The discharges migrated on surface soils, in a general north/northwest direction, away from the facility building. The writer additionally noted dragout wastes (free liquid), generated in the facility electroplating area, migrating from the secondary containment area onto the facility's unprotected concrete floor and out onto the bare ground in front of the electroplating area. The majority of these discharges were documented during the January 11 & 13, 2006 CEI.

Track No: 100046 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to comply with site closre requirements.

Failure to comply with site closre requirements.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to comply with site closre requirements.
Failure to comply with site closre requirements.

Investigation: 451838 Comment Date: 06/27/2006

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On February 22, 2001, the TNRCC Region 13 office received a Closure Plan for Astro Plating, Inc. (submitted by FEE and dated October 2000). The Closure Plan was submitted to address the removal of waste and contaminated media from the facility. On December 10, 2001, a letter was sent from the TNRCC Corrective Action Section to AP. In the letter, the Corrective Action Section stated that they had reviewed and could not approve the submitted Closure Plan. A listing of comments to the Closure Plan was included in the letter. A revised Closure Plan to address the comments from the TNRCC Corrective Action Section was not submitted by the facility for the Executive Director's written approval". On July 1, 2004, the TCEQ Corrective Action Section requested a response from Astro Plating to the December 10, 2001 Comments Letter. The July 1, 2004 letter additionally requested a remediation status update. On October 28, 2004 the TCEQ Corrective Action Section issued a "Second Request for Remediation Status" letter to Astro Plating. The letter gave Astro Plating 30 days to submit a response. As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

Investigation: 568385 Comment Date: 08/03/2007

As of this date, Astro Plating has not responded to the TCEQ Corrective Action Section.

Track No: 100047 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to update the Facility 's Notice of Registration to add or remove carious units and waste streams.
Failure to update the Facility 's Notice of Registration to add or remove carious units and waste streams.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to update the Facility 's Notice of Registration to add or remove carious units and waste streams.
Failure to update the Facility 's Notice of Registration to add or remove carious units and waste streams.

Investigation: 451838 Comment Date: 06/27/2006

During a past investigation, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of the January 2006 CEI, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR as generated waste streams. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of the investigation.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, Astro Plating was again using waste code

0001316H on hazardous waste manifests to document the accumulation, shipping, and disposal of hazardous waste. Astro Plating has failed to update the NOR to include this waste code. Manifest #3445988 was the only hazardous waste manifest shipment generated since the last CEI. During past investigations, the facility was documented using waste code 0001316H for the accumulation, shipping, and disposal of hazardous waste. During the January 11 & 13, 2006 CEI, Astro Plating provided AWS for 2002, 2003 and 2004. These AWS listed waste code 0001316H as the waste generated at the site. As of the date of this report, the facility has failed to notify the TCEQ of this waste code and generated waste stream. Additionally, the waste streams generated from the electroplating bath processes and electroplating bath residues were not listed on the facility NOR. Finally, the facility maintains four storage tanks and four floor sumps as part of its waste collection, storage, and treatment process. Only two of the storage tanks were registered on the facility's NOR as SWMUs at the time of this investigation.

Track No: 100048 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to submitted complete hazardous waste manifests.
Failure to submitted complete hazardous waste manifests.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to submitted complete hazardous waste manifests.
Failure to submitted complete hazardous waste manifests.

Investigation: 451838 Comment Date: 06/27/2006

During the investigation, two manifests were available for review for the shipment of hazardous waste from the facility for disposal during the three years prior to the investigation (2005, 2004, and 2003). The two manifests #214193 and #2002837 failed to have: the TCEQ SWR No.; the transporter's state ID number; and the state waste codes. Additionally, Manifest #214193 failed to have the facility's generator's EPA ID Number.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, only one hazardous waste manifest (# 3775988) was available for review since the January 11 & 13, 2006 CEI. The manifest failed to have the correct state waste code. Additionally, a review of the hazardous waste manifests for the past three years indicate one additional manifest, #214193, failed to have: the TCEQ SWR No.; the transporter's state ID number; the state waste codes, and the facility's generator's EPA ID Number.

Track No: 100049 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to maintain hazadous waste records applicable to hazardous waste generators.
Failure to maintain hazadous waste records applicable to hazardous waste generators.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to maintain hazadous waste records applicable to hazardous waste generators.
Failure to maintain hazadous waste records applicable to hazardous waste generators.

Investigation: 451838 Comment Date: 06/27/2006

During the investigation, it was requested of the facility to provide records of the amounts of waste generated, stored, and/or treated at the facility. Mr. Salinas only provided copies of the facility Annual Waste Summaries (AWS) for the years 2002, 2003, & 2004. A review of

the TRACS database indicated that the facility's 2002 and 2003 AWS match the TCEQ reports. The facility's 2004 AWS listed 1600 lbs. of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". At the time of the investigation, Astro Plating was not required to have submitted the 2005 Annual Waste Summary. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, it was requested of the facility to provide records of the amounts of waste generated, stored and/or treated at the facility. Mr. Salinas provided copies of the facility Annual Waste Summaries for the years 2004 & 2006. A review of the TRACS database indicated that the facility's 2006 AWS matches the TCEQ report. The facility's 2004 AWS listed 1600 lbs of waste code 0001312H, however, the TCEQ report listed "no detail records found". The TCEQ 2005 report additionally listed "no detail records found". Mr. Salinas was unable to provide the 2005 AWS. Additionally, Mr. Salinas was unable to provide documentation of the amount of wastes generated and treated at the facility.

Track No: 100050 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to comply with requirements for emergency preparedness.
Failure to comply with requirements for emergency preparedness.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to comply with requirements for emergency preparedness.
Failure to comply with requirements for emergency preparedness.

Investigation: 451838 Comment Date: 06/27/2006

During the investigation, the writer observed portions of the concrete berm walls that comprised part of the containment/sump system beneath the electroplating baths deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and also would have been unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal site alarms and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire, and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would back up these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and January 11 & 13, 2006 CEI, the writer observed portions of the concrete berm walls, that comprised part of the containment/sump system beneath the electroplating baths, deteriorated (south & east sides) to a point that the berm would be unable to contain any release from the plating baths. In addition, containment structures around tanks and containers in the Metal/Paint Stripping area were in disrepair and appear unable to contain any sudden release from this area. The facility's 2000 Emergency Procedures and Contingency Plan stated that the facility had an internal

site alarm and communication system. However, the writer was unable to identify any internal communication or alarm system for emergency instruction in the facility's production areas. Additionally, the 2000 Emergency Procedures and Contingency Plan stated that the facility has made contact and arrangements to familiarize local hospitals, local fire and police departments with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. However, Astro Plating was unable to provide documentation that would support these claims. Additionally, Astro Plating did not identify or provide an agreement with an emergency response contractor to respond to a release at the facility. Astro Plating is not in compliance with this ordering provision.

Track No: 100051 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to provide hazardous waste training programs to Facility personnel and failed to keep records of Facility employees who manage hazardous waste.
Failure to provide hazardous waste training programs to Facility personnel and failed to keep records of Facility employees who manage hazardous waste.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to provide hazardous waste training programs to Facility personnel and failed to keep records of Facility employees who manage hazardous waste.
Failure to provide hazardous waste training programs to Facility personnel and failed to keep records of Facility employees who manage hazardous waste.

Investigation: 451838 Comment Date: 06/27/2006

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "On January 14, 2000, the TNRCC Region 13 office received an ECA report, dated December 1999, from the facility. Section 5.1 of the ECA report, labeled "Employee Training Program - Chemical Hazards", described the training regimen of facility personnel who manage hazardous waste. The section contained instructions on new employee training (i.e., facility tour, MSDS books, PPE and spill equipment), the use of spill equipment (i.e., fire, extinguisher, absorbents, cut-off systems, communications and alarms), response actions to fire or explosion, response actions to groundwater incidents, and shut down operations of the facility. On June 11, 2002, the TNRCC Region 13 office received documentation submitted by Geostrata Environmental Consultants, Inc., (GEC) on behalf of Astro Plating (AP). The documentation included "Hazardous Communication 29 CFR 1910.1200 Training" certificates, dated May 28, 2002, for Daniel Salinas, Esidro Salinas, Baleriano Martinez, Jesus Gonzales, Daniel Martinez, Tomas Costilla, and Daniel Salinas, Jr., all employees at the facility. However, during the investigation, the facility had failed to maintain personnel files and documents which included: The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written description for each position at the facility; a written description of the type and amount of introductory and continuing training that will be given to each person filling a position; and records that document that the training or job experience required has been given to each employee." During the January 11 & 13 CEI, Astro Plating was unable to provide any training records. The observations made on the December 19, 2002 CEI Report continued to occur. Based on past and current observations, Astro Plating is not in compliance with this ordering provision.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation and January 11 & 13, 2007 CEI, Astro Plating has been unable to provide any training records. The observations made during the December 19, 2002 CEI Report continued to occur.

Track No: 100052 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to label and cover a hazardous waste storge drum.
Failure to label and cover a hazardous waste storge drum.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to label and cover a hazardous waste storge drum.
Failure to label and cover a hazardous waste storge drum.

Investigation: 451838 Comment Date: 06/27/2006

During the investigation, the writer observed three hazardous waste storage tanks located in the facility's Wastewater Pretreatment Area and a fourth hazardous waste tank in the facility's Metal/Paint Stripping Area. The three tanks in the Wastewater Pretreatment area were observed with hazardous waste labels. The fourth hazardous waste tank was labeled as the facility's wastewater holding tank. The tank failed to be labeled with the words "hazardous waste". The writer was unable to observe any drums or other containers of waste.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer again observed that the fourth hazardous waste tank failed to be labeled with the words "hazardous waste". Additionally, the writer observed one unlabeled drums containing an unknown substance.

Track No: 100053 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to comply with tank system standars.
Failure to comply with tank system standars.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to comply with tank system standars.
Failure to comply with tank system standars.

Investigation: 451838 Comment Date: 06/27/2006

As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant

portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 100055 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to comply with tank system inspection requirements.
Failure to comply with tank system inspection requirements.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to comply with tank system inspection requirements.
Failure to comply with tank system inspection requirements.

Investigation: 451838 Comment Date: 06/27/2006

As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Investigation: 568385 Comment Date: 08/03/2007

The December 19, 2002 Compliance Evaluation Investigation (CEI) Report stated "the facility had not submitted or did not present any information or certifications of compliance to indicate that the tanks on site, which include the four waste storage tanks, had complied with any relevant portions of 40 CFR 265.191 through 265.193 (relating to tank system integrity and containment and detection of releases). In addition, the facility had not taken steps to prevent the mixing of incompatible wastes, specifically, mixing chromic acid wastewater with cyanide bearing waste, in accordance with 40 CFR 265.199(a) (relating to incompatible wastes). Finally, the facility does not record in the facility operating record inspections performed on the hazardous waste storage tanks in accordance with 40 CFR 265.195 (relating to tank inspections)" As of the date of this report, Astro Plating has not submitted or provided any information that the tanks are in compliance with relevant portions of 40 CFR 265.191 through 265.193. Additionally, Astro Plating has not maintained a record of inspections performed on the hazardous waste storage tanks.

Track No: 100056 **Compliance Due Date: To Be Determined**

Alleged Violation:

Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to submit a source reduction and waste minimization plan for the Facility.
Failure to submit a source reduction and waste minimization plan for the Facility.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to submit a source reduction and waste minimization plan for the Facility.
Failure to submit a source reduction and waste minimization plan for the Facility.

Investigation: 451838 Comment Date: 06/27/2006

During the September 17 & 19, 2002 CEI and the January11 & 13, 2006 CEI, the investigators requested all of the facility's records. Astro Plating failed to submit or present a copy of the Source Reduction and Waste Minimization Plan.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 Site Investigation, and past investigations, the writer and the past investigator requested all of the facility's records. Astro Plating failed to submit or present a

copy of the Source Reduction and Waste Minimization Plan.

Track No: 100057 **Compliance Due Date: To Be Determined**

Alleged Violation:
Investigation: IE0001562002001 Comment Date: 08/06/2003

Failure to update the facility's six digit waste codes to eight digit waste codes.
Failure to update the facility's six digit waste codes to eight digit waste codes.

Investigation: IE0001562002032 Comment Date: 08/06/2003

Failure to update the facility's six digit waste codes to eight digit waste codes.
Failure to update the facility's six digit waste codes to eight digit waste codes.

Investigation: 451838 Comment Date: 06/28/2006

During the investigation, the writer reviewed the facility's hazardous waste manifests. The facility had only two manifests for the past three years. The two manifests (#214193 and #202837) failed to have the eight digit Texas Waste Classification codes. The two manifests described the wastes as Nickel/Aluminum Plating Waste (F006) and Plating Waste (F006) respectively. A review of the Notice of Registration (NOR) lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that the wastes generated at the site contained levels of cyanide. The waste code should have the form code reflecting the presence of cyanide.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, the writer reviewed the facility's hazardous waste manifests. The facility only had one manifest since the January 11 & 13, 2006 CEI. The manifest (# 3775988) failed to have the same corresponding eight digit Texas Waste Classification codes as was listed on the facility's NOR. Over the past three years, only one other manifest fits was prepared in this time frame. That manifest (#214193) failed to have the eight digit Texas Waste Classification code. The two manifests described the wastes as Chromium Solid Waste (D007) & (F006) and Nickel/Aluminum Plating Waste (F006) respectively. A review of the NOR lists the active waste code as 0010504H. Sample analysis conducted during the September 2002 CEI indicated that these wastes generated at the site contained cyanide. The waste code should have the form code reflecting the presence of cyanide.

Track No: 236283 **Compliance Due Date: To Be Determined**

2A TWC Chapter 7.101
SWR# 37656, Ordering Provision 2.a.ii.
1998-1071-IHW-E

Alleged Violation:
Investigation: 451838 Comment Date: 05/11/2006

"Salinas and Astro shall undertake the following technical requirement immediately upon the effective date of a Commission Order: begin preparing manifests for shipment of hazardous waste in accordance with 30 Tex. Admin. Code 335.10 (relating to Recordkeeping and Annual Reporting Procedures applicable to Generators)."

During the investigation, two manifests were available for review for the shipment of hazardous waste from the facility for disposal during the three years prior to the investigation (2005, 2004, and 2003). The two manifests #214193 and #2002837 failed to have: the TCEQ SWR No.; the transporter's state ID number; and the state waste codes. Additionally, Manifest #214193 failed to have the facility's generator's EPA ID Number.

Investigation: 568385 Comment Date: 08/03/2007

During the July 23, 2007 site investigation, only one hazardous waste manifest (# 3775988) was available for review since the January 11 & 13, 2006 CEI. The manifest failed to have the correct state waste code. Additionally, a review of the hazardous waste manifests for the past three years indicate one additional manifest, #214193, failed to have: the TCEQ SWR No.; the transporter's state ID number; the state waste codes, and the facility's generator's EPA ID Number.

Signed _____ **Date** _____

Environmental Investigator

Signed _____ **Date** _____

Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

___Letter to Facility (specify type) : _____

Investigation Report

___Sample Analysis Results

___Manifests

___NOR

___Maps, Plans, Sketches

___Photographs

___Correspondence from the facility

___Other (specify) :

_____

_____

REFERENCE 3

EXTRA ENVIRONMENTAL, INC.
2426 Freedom, San Antonio, Texas 78217

July 17, 2008

Mr. Daniel Salinas
Astro Plating, Inc.
915 Roosevelt Avenue
San Antonio, Texas 78210

RE: Astro Plating, Inc.
915 Roosevelt Avenue
San Antonio, Bexar County, Texas
Cause No. D-1-GV-07-002448; Docket No. 1998-1071-IHW-E

Dear Mr. Salinas:

Please allow this letter and attachments to serve as a formal update on sampling activities conducted at the above referenced project site.

Three (3) monitor wells that are situated on the project site were gauged, purged and sampled on 07/07/2008. The monitor wells were initially gauged early on the morning of 07/07/2008 and indicated a groundwater gradient towards the west at a rate of 0.1498 feet per 100 linear feet (0.0015 feet per linear foot). After gauging, the monitor wells were gently purged of three (3) volumes of groundwater or to dryness (whichever occurred first). The monitor wells were then allowed to return to static levels (approximately 3 hours) prior to sampling. All three (3) monitor wells were sampled the afternoon of 07/02/2008 and witnessed by representatives of the Texas Commission on Environmental Quality (TCEQ). The groundwater samples were labeled, placed on ice and transported to the analytical laboratory. All groundwater samples were documented with Chain-of-Custody.

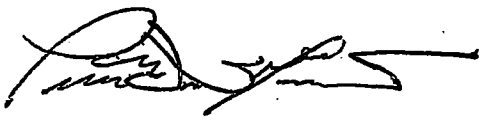
Laboratory analyses of the groundwater samples indicated nondetectable total antimony (<0.01 mg/L), nondetectable total arsenic (<0.01 mg/L), total barium concentrations ranging from 0.089 mg/L to 0.134 mg/L, nondetectable total beryllium (<0.004 mg/L), nondetectable total cadmium (<0.05 mg/L), total chromium concentrations ranging from nondetectable (<0.01 mg/L) to 2.04 mg/L, nondetectable total copper (<0.02 mg/L), nondetectable total lead (<0.01 mg/L), total mercury concentrations ranging from nondetectable (<0.0002 mg/L) to 0.00027 mg/L, nondetectable total nickel (<0.01 mg/L), nondetectable total selenium (<0.01 mg/L), nondetectable total silver (<0.05 mg/L), nondetectable

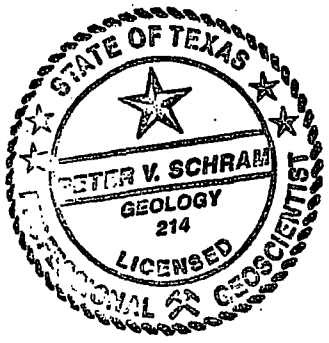
total thallium (<0.01 mg/L), total zinc concentrations ranging from nondetectable (<0.01 mg/L) to 0.02 mg/L, nondetectable total cyanide (<0.02 mg/L) and a pH ranging from 6.5 to 6.6. The only contaminant of concern (COC) exceedance above the Texas Risk Reduction Program (TRRP) Residential Tier 1 "critical" Protective Concentration Level (PCL) was total chromium. All other analyzed concentrations of the COC's occurred at levels below the Method Detection Level (MDL) or the TRRP Residential Tier 1 "critical" PCL. It should be noted that laboratory analyses completed on groundwater samples previously, indicated much higher concentrations of total barium, total chromium, total copper, total nickel, and total zinc. Although the previous samples were collected in 1999, and the reduced concentrations could be attributed to dilution and/or migration, it is believed that the reduced concentrations are the result of sampling methodology. Specifically, samples collected on 07/07/2008 were stored in unpreserved containers and immediately transported to the analytical laboratory, where the samples were filtered prior to analyses (filtered the same day as collected). Since metals can be "trapped" within soil particles that may be present in the groundwater sample, a false positive or skewed results can occur. It is our belief that filtering eliminated most, if not all false positives, and presents a more accurate picture of current conditions.

Based on the attached Groundwater Concentration Isopleth maps and the noted groundwater gradient, it appears that the COC's have migrated offsite. Specifically, it appears that groundwater, underlying the Texas Department of Transportation (TxDOT) right-of-way (ROW), has been impacted with total chromium. As discussed previously and per the rules and regulations outlined in the TRRP (30 TAC 350), additional assessment will be required. It is recommended that TxDOT be contacted and permission secured to sample the monitor well that currently exists in the ROW. Upon completion of this sampling, it may be necessary to install additional monitor wells along the ROW as well as collect surface soil samples. A formal Work Plan/Traffic Plan will be prepared prior to initiation of any additional assessment (beyond sampling of the established monitor well).

If you have any questions regarding any aspect of the sampling event or this letter, please call me at (210) 829-7137.

Sincerely,





Peter V. Schram, PG 214
Project Manager

EXTRA ENVIRONMENTAL, INC.
2426 Freedom, San Antonio, Texas 78217

April 28, 2009

Mr. Daniel Salinas
Astro Plating, Inc.
915 Roosevelt Drive
San Antonio, Texas 78210

RE: Groundwater Assessment
Astro Plating, Inc./TxDOT Right-of-Way
915 Roosevelt Drive
San Antonio, Bexar County, Texas

Dear Mr. Salinas:

Please allow this letter to serve as a formal update to groundwater sampling that occurred on the above referenced project site. Groundwater measurements were collected from monitor wells located on your property and the Texas Department of Transportation (TxDOT) right-of-way (ROW) on 2/13/2009 and 2/16/2009. Specifically, groundwater measurements were collected from monitor well MW-1, MW-2, and MW-3 on the Astro Plating property, and monitor well MW-1, MW-2, and MW-3 on the TxDOT ROW. Groundwater samples were also collected from monitor well MW-1, MW-2, and MW-3 on the TxDOT ROW. Due to the number of contaminants of concern (COC) associated with previous completed sampling events and industrial processes conducted at the Astro Plating facility, each COC is addressed individually below.

Total Antimony

Total antimony was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.01 mg/L) to 0.01 mg/L. The "critical" Protective Concentration Level (PCL) for total antimony is 0.01 mg/L. No exceedance of the "critical" PCL for total antimony occurred.

Total Arsenic

Total arsenic was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.01 mg/L). The "critical" PCL for total arsenic is 0.01 mg/L. No exceedance of the "critical" PCL for total arsenic occurred.

Total Barium
Total barium was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from 0.165 mg/L to 0.254 mg/L. The "critical" PCL for total barium is 2.00 mg/L. No exceedance of the "critical" PCL for total barium occurred.

Total Beryllium
Total beryllium was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.004 mg/L). The "critical" PCL for total beryllium is 0.004 mg/L. No exceedance of the "critical" PCL for total beryllium occurred.

Total Cadmium
Total cadmium was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.01 mg/L). The "critical" PCL for total cadmium is 0.01 mg/L. No exceedance of the "critical" PCL for total cadmium occurred.

Total Chromium
Total chromium was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.01 mg/L) to 0.796 mg/L. The "critical" PCL for total chromium is 0.10 mg/L. The only exceedance of the "critical" PCL for total chromium, occurred in monitor well MW-1 along the TxDOT ROW. Monitor well MW-1 is located immediately downgradient from the Astro Plating facility.

Total Copper
Total copper was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.02 mg/L) to 0.017 mg/L. The "critical" PCL for total copper is 1.30 mg/L. No exceedance of the "critical" PCL for total copper occurred.

Total Lead
Total lead was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.01 mg/L) to 0.031 mg/L. the "critical" PCL for total lead is 0.015 mg/L. The only exceedance of the "critical" PCL for total lead, occurred in monitor well MW-2 along the TxDOT ROW. Monitor well MW-2 is located downgradient from the eastern adjoining property. This exceedance does not appear to be related to historical activities conducted at the Astro Plating facility.

Total Mercury
Total mercury was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.0002 mg/L. the "critical" PCL for total mercury is 0.002 mg/L. No exceedance of the "critical" PCL for total mercury occurred.

Total Nickel

Total nickel was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.01 mg/L) to 0.017 mg/L. The "critical" PCL for total nickel is 0.49 mg/L. No exceedance of the "critical" PCL for total nickel occurred. It should be noted that the only detectable concentrations of total nickel occurred in monitor well MW-2 along the TxDOT ROW. Monitor well MW-2 is located downgradient from the eastern adjoining property. This analyzed concentration does not appear to be related to historical activities conducted at the Astro Plating facility.

Total Selenium

Total selenium was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.05 mg/L). The "critical" PCL for total selenium is 0.05 mg/L. No exceedance of the "critical" PCL for total selenium occurred.

Total Silver

Total silver was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.05 mg/L). The "critical" PCL for total silver is 0.12 mg/L. No exceedance of the "critical" PCL for total silver occurred.

Total Zinc

Total zinc was analyzed in the three (3) TxDOT monitor wells in concentrations ranging from nondetectable (<0.01 mg/L) to 0.251 mg/L. The "critical" PCL for total zinc is 7.3 mg/L. No exceedance of the "critical" PCL for total zinc occurred. It should be noted that the total zinc was detected in monitor well MW-2 only. Monitor well MW-2 is located downgradient from the eastern adjoining property. This analyzed concentration does not appear to be related to historical activities conducted at the Astro Plating facility.

Total Thallium

Total thallium was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.01 mg/L). The "critical" PCL for total thallium is 0.002 mg/L. While the detection levels for total thallium are greater than the "critical" PCL, no detectable concentrations have ever been analyzed.

Total Cyanide

Total cyanide was analyzed in the three (3) TxDOT monitor wells in nondetectable concentrations (<0.02 mg/L). The "critical" PCL for total cyanide is 0.20 mg/L. No exceedance of the "critical" PCL for total cyanide occurred.

pH

The pH of each groundwater sample collected from the three (3) TxDOT monitor wells, was analyzed. Laboratory analyses of the groundwater samples indicated reactivities ranging from 6.46 su to 6.11 su. These reactivities are within the ranges analyzed in groundwater samples collected from the monitor wells located on the Astro Plating facility.

Groundwater Gradient

Groundwater levels were recorded in the three (3) monitor wells located on the Astro Plating facility and in the three (3) monitor wells located along the TxDOT ROW. After correcting for elevational differences in the monitor wells, it was determined that the groundwater gradient is towards the south-southwest from the Astro Plating facility. The groundwater gradient on the western end of the Astro Plating facility occurs towards the southwest with a gradient of approximately 1 foot/150 linear feet (0.0067 feet/linear foot). The groundwater gradient on the eastern end of the facility occurs towards the south with a gradient of approximately 1 foot/180 linear feet (0.0056 feet/linear feet).

Conclusions

1. Total chromium was analyzed in the groundwater sample collected from monitor well MW-1 along the TxDOT ROW in excess of the "critical" PCL for total chromium.
2. Total lead was analyzed in the groundwater sample collected from monitor well MW-2 along the TxDOT ROW in excess of the "critical" PCL for total lead, but does not appear to be related to historical operations conducted at the Astro Plating facility.
3. Total nickel was analyzed in the groundwater sample collected from monitor well MW-2 along the TxDOT ROW. The analyzed concentration was below the "critical" PCL for total nickel and does not appear to be related to historical operations conducted at the Astro Plating facility.
4. Total zinc was analyzed in the groundwater sample collected from monitor well MW-2 along the TxDOT ROW. The analyzed concentration was below the "critical" PCL for total zinc and does not appear to be related to historical operations conducted at the Astro Plating facility.
5. The groundwater gradient at the Astro Plating facility and along the TxDOT ROW is towards the south-southwest, ranging from 0.0056 feet/linear feet to 0.0067 feet/linear feet.

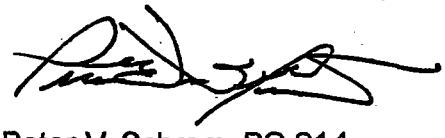
Recommendations

Since the lateral extent of total chromium impact to the groundwater has not been determined, it is recommended that monitor wells MW-6 and MW-7, located along the south side of IH-10 (in the TxDOT ROW), be gauged and sampled (see attached location maps). Data generated from this sampling event should be combined with data generated previously to determine if the lateral extent of total chromium impact has been delineated.

Once this letter and attachments have been reviewed, the attached copies should be forwarded to the Texas Commission on Environmental Quality and the Texas Department of Transportation. With your approval, the Texas Department of Transportation will be contacted to arrange right of ingress/egress to gauge and sample monitor wells MW-6 and MW-7.

If you have any questions concerning any aspect of this letter, recommendation, or attachments, please call me at (210) 829-7137.

Sincerely,



Peter V. Schram, PG 214
Project Manager

attachments

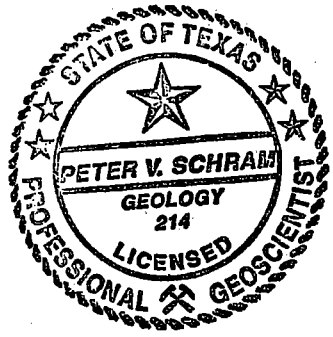


TABLE 1: WATER ELEVATIONS (ft)

Sample I.D.	Date	Time	depth to water	product thickness	corrected depth to water*	casing elevation	corrected water elevation
MW1 (Astro)	2/13/08	1134	21.240	0.00	21.240	99.340	78.100
MW2 (Astro)	2/13/08	1141	21.360	0.00	21.360	99.455	78.095
MW3 (Astro)	2/13/08	1152	21.500	0.00	21.500	99.055	77.555
MW1 (Astro)	7/7/08	935	21.440	0.00	21.440	99.340	77.900
MW2 (Astro)	7/7/08	930	21.305	0.00	21.305	99.455	78.150
MW3 (Astro)	7/7/08	941	21.560	0.00	21.560	99.055	77.495
MW-1 (TxDOT)	2/13/09	1025	21.630	0.00	21.630	99.035	77.405
MW-2 (TxDOT)	2/13/09	1045	21.245	0.00	21.245	99.235	77.990
MW-3 (TxDOT)	2/13/09	1110	20.580	0.00	20.580	97.235	76.655
MW-1 (Astro)	2/16/09	1456	21.850	0.00	21.850	99.340	77.490
MW-2 (Astro)	2/13/09	1535	21.990	0.00	21.990	99.455	77.465
MW-3 (Astro)	2/16/09	1440	22.090	0.00	22.090	99.055	76.965

(*)depth to water minus (.72 X product thickness) for gasoline
(*)depth to water minus (.82 X product thickness) for diesel

TABLE 2: GROUNDWATER SAMPLE LOCATIONS

Sample I.D.	Laboratory I.D.	Date	Time	Location
ASTRO				
MW-1	82023	10/26/99	1133	groundwater sample from monitor well MW-1; collected by Forbes
MW-1(S)	994004-1	10/26/99	1115	groundwater sample from monitor well MW-1; split sample with TCEQ
MW-1(D)	994004-4	10/26/99	1115	groundwater sample from monitor well MW-1; duplicate with TCEQ split sample
MW-1	0807-077-1	7/7/08	1338	groundwater sample from monitor well MW-1; collected by EEI
MW-2	82024	10/26/99	1119	groundwater sample from monitor well MW-2; collected by Forbes
MW-2(S)	994004-2	10/26/99	1135	groundwater sample from monitor well MW-2; split sample with TCEQ
MW-2	0807-077-2	7/7/08	1328	groundwater sample from monitor well MW-2; collected by EEI
MW-3	82025	10/26/99	1150	groundwater sample from monitor well MW-3; collected by Forbes
MW-3(S)	994004-3	10/26/99	1115	groundwater sample from monitor well MW-3; split sample with TCEQ
MW-3	0807-077-3	7/7/08	1358	groundwater sample from monitor well MW-3; collected by EEI
TxDOT ROW				
MW-1 (TxDOT)	0902-162-1	2/13/09	1457	groundwater sample from TxDOT monitor well MW-1; collected by EEI
MW-2 (TxDOT)	0902-162-2	2/13/09	1511	groundwater sample from TxDOT monitor well MW-2; collected by EEI
MW-3 (TxDOT)	0902-162-3	2/13/09	1524	groundwater sample from TxDOT monitor well MW-3; collected by EEI

TABLE 3: GROUNDWATER LABORATORY ANALYSES (mg/L)

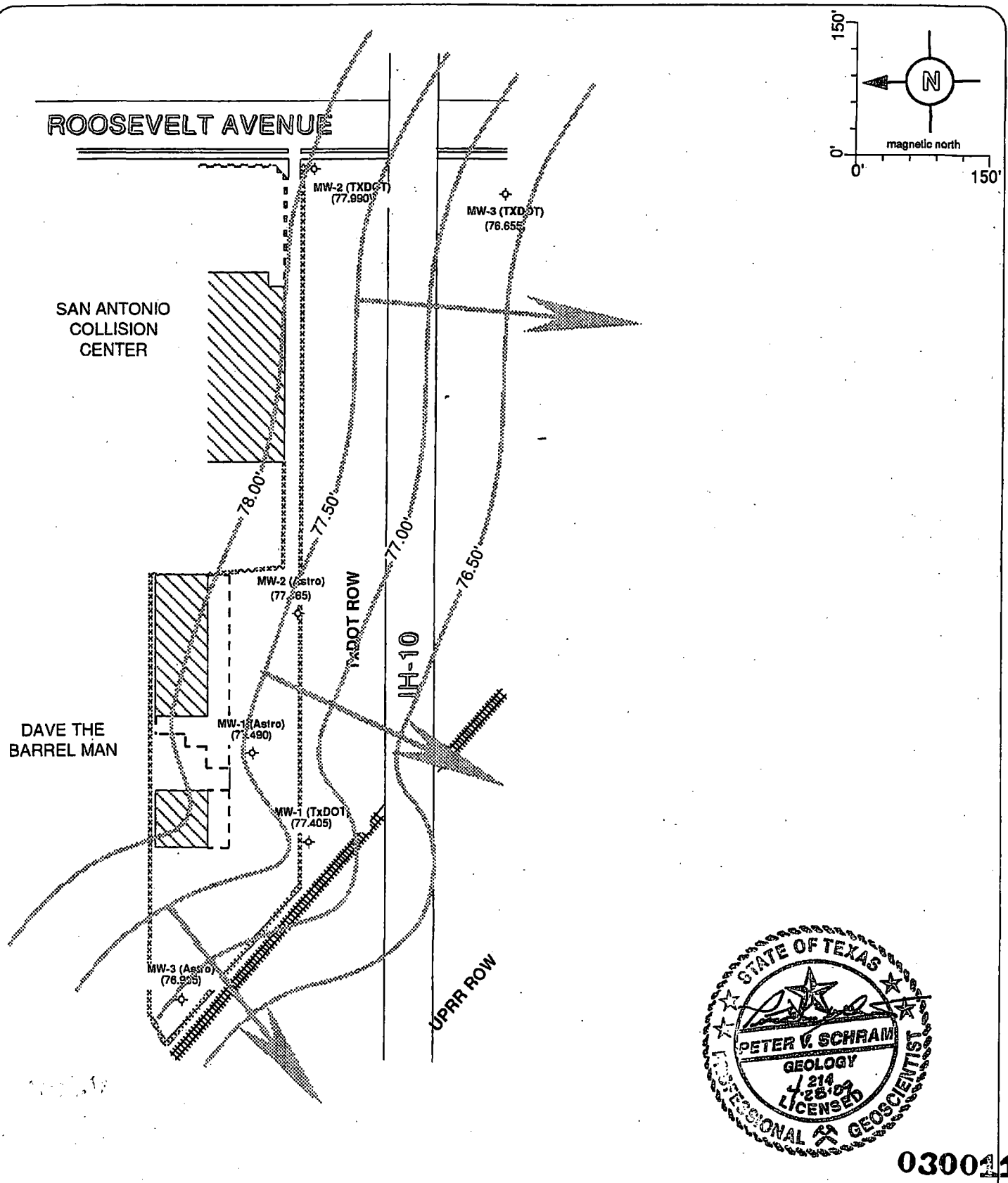
Sample I.D.	Laboratory I.D.	Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Copper	Total Lead	Total Mercury	Total Nickel	Total Selenium	Total Silver
gwGWing		**0.01**	**0.01**	**2.00**	**0.004**	**0.01**	**0.10**	**1.30**	**0.015**	**0.002**	**0.49**	**0.05**	**0.12**
gwGWclass3		0.60	1.00	200.00	0.40	0.50	10.00	130.00	1.50	0.20	49.00	5.00	12.00
airGWinh-v		NA	NA	NA	NA	NA	NA	NA	NA	120000.00	NA	NA	NA
MW-1	82023	NA	NA	NA	NA	NA	**1.31**	0.03	NA	NA	<0.02	NA	NA
MW-1(S)	994004-1	NA	<0.05	0.26	NA	<0.05	**14.30**	NA	<0.050	<0.002	<0.05	<0.050	<0.050
MW-1(D)	994004-4	NA	**0.06**	0.7	NA	<0.05	**12.90**	NA	**0.05**	<0.002	0.06	<0.050	<0.050
MW-1	0807-077-1	<0.01	<0.01	0.1	<0.004	<0.005	**0.498**	<0.02	<0.01	0.00027	<0.01	<0.01	<0.05
MW-2	82024	NA	NA	NA	NA	NA	**16.40**	0.04	NA	NA	0.35	NA	NA
MW-2(S)	994004-2	NA	<0.05	0.17	NA	<0.05	**1.09**	NA	<0.050	<0.002	<0.05	<0.050	<0.050
MW-2	0807-077-2	<0.01	<0.01	0.089	<0.004	<0.005	**2.04**	<0.02	<0.01	<0.0002	<0.01	<0.01	<0.05

030009

TABLE 3: GROUNDWATER LABORATORY ANALYSES (mg/L)

Sample I.D.	Laboratory I.D.	Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Copper	Total Lead	Total Mercury	Total Nickel	Total Selenium	Total Silver
gwGWing		**0.01**	**0.01**	**2.00**	**0.004**	**0.01**	**0.10**	**1.30**	**0.015**	**0.002**	**0.49**	**0.05**	**0.12**
gwGWclass3		0.60	1.00	200.00	0.40	0.50	10.00	130.00	1.50	0.20	49.00	5.00	12.00
airGWinh-v		NA	NA	NA	NA	NA	NA	NA	NA	120000.00	NA	NA	NA
MW-3	82025	NA	NA	NA	NA	NA	0.05	0.05	NA	NA	0.26	NA	NA
MW-3(S)	994004-3	NA	<0.05	0.27	NA	<0.05	<0.05	NA	<0.050	<0.002	<0.05	<0.050	<0.050
MW-3	0807-077-3	<0.01	<0.01	0.134	<0.004	<0.005	<0.01	<0.02	<0.01	<0.0002	<0.01	<0.01	<0.05
MW-1 (TxDOT)	0902-162-1	0.01	<0.01	0.254	<0.004	<0.005	**0.796**	<0.02	<0.01	<0.0002	<0.01	<0.01	<0.05
MW-2 (TxDOT)	0902-162-2	<0.01	<0.01	0.566	<0.004	<0.005	<0.01	0.017	**0.031**	<0.0002	0.017	<0.01	<0.05
MW-3 (TxDOT)	0902-162-3	<0.01	<0.01	0.165	<0.004	<0.005	<0.01	<0.02	<0.01	<0.0002	<0.01	<0.01	<0.05

Sample I.D.	Laboratory I.D.	Total Zinc	Total Thallium	Total Cyanide	TCLP Chromium	pH
gwGWing		**7.3**	**0.002**	**0.2**	**0.1**	NA
gwGWclass3		730	0.2	20	10	NA
airGWinh-v		NA	NA	NA	NA	NA
MW-1	82023	NA	NA	NA	NA	7.1
MW-1(S)	994004-1	0.10	NA	<0.02	**15.40**	NA
MW-1(D)	994004-4	0.11	NA	NA	**14.70**	NA
MW-1	0807-077-1	0.02	<0.01	<0.02	NA	6.5
MW-2	82024	NA	NA	NA	NA	7.1
MW-2(S)	994004-2	<0.05	NA	<0.02	NA	NA
MW-2	0807-077-2	<0.01	<0.01	<0.02	NA	6.5
MW-3	82025	NA	NA	NA	NA	7
MW-3(S)	994004-3	0.10	NA	<0.02	NA	NA
MW-3	0807-077-3	<0.01	<0.01	<0.02	NA	6.6
MW-1 (TxDOT)	0902-162-1	<0.01	<0.01	<0.02	NA	6.11
MW-2 (TxDOT)	0902-162-2	0.251	<0.01	<0.02	NA	6.61
MW-3 (TxDOT)	0902-162-3	<0.01	<0.01	<0.02	NA	6.46

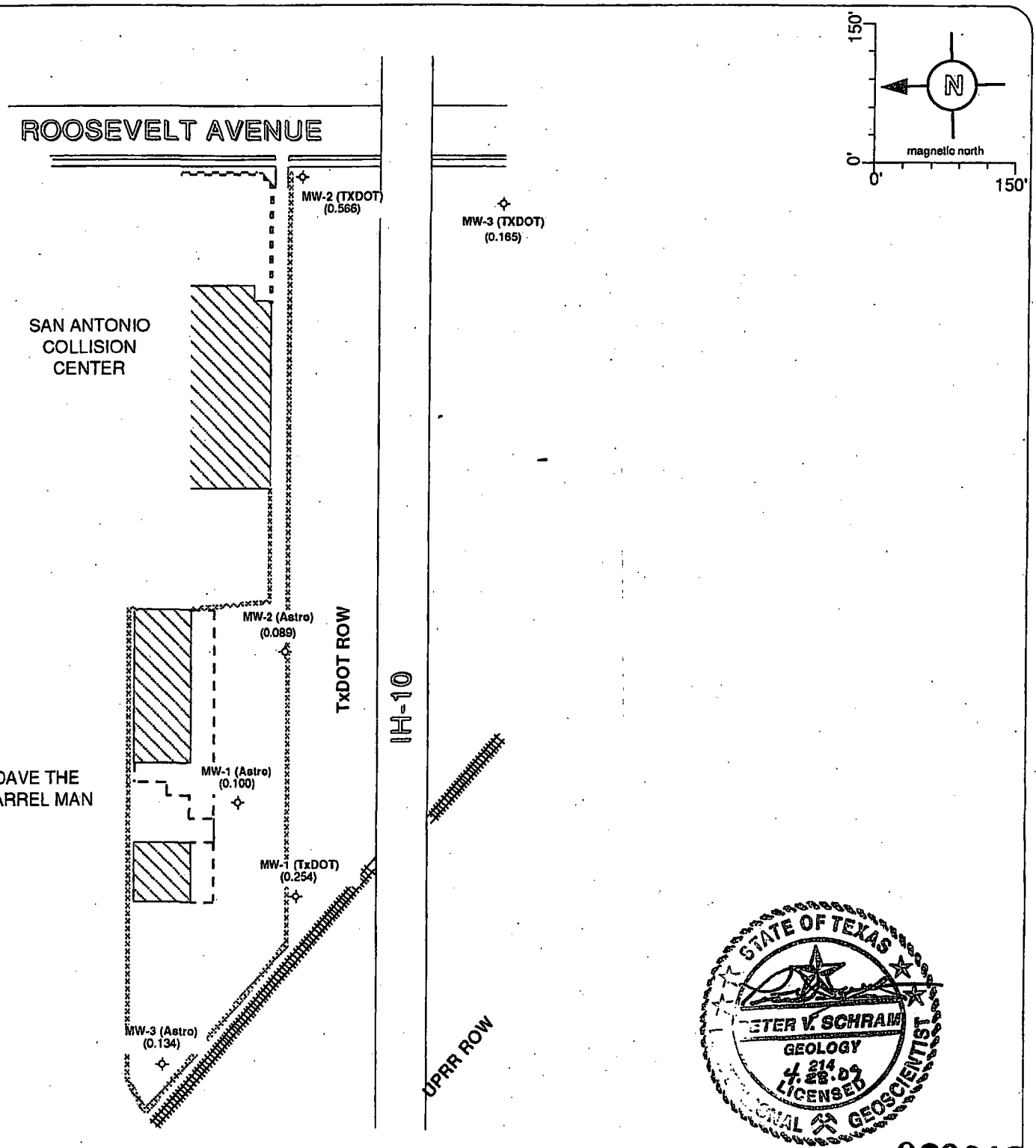


030011

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GROUNDWATER
GRADIENT MAP
(2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
4.214
4.28.09
LICENSED
PROFESSIONAL GEOSCIENTIST

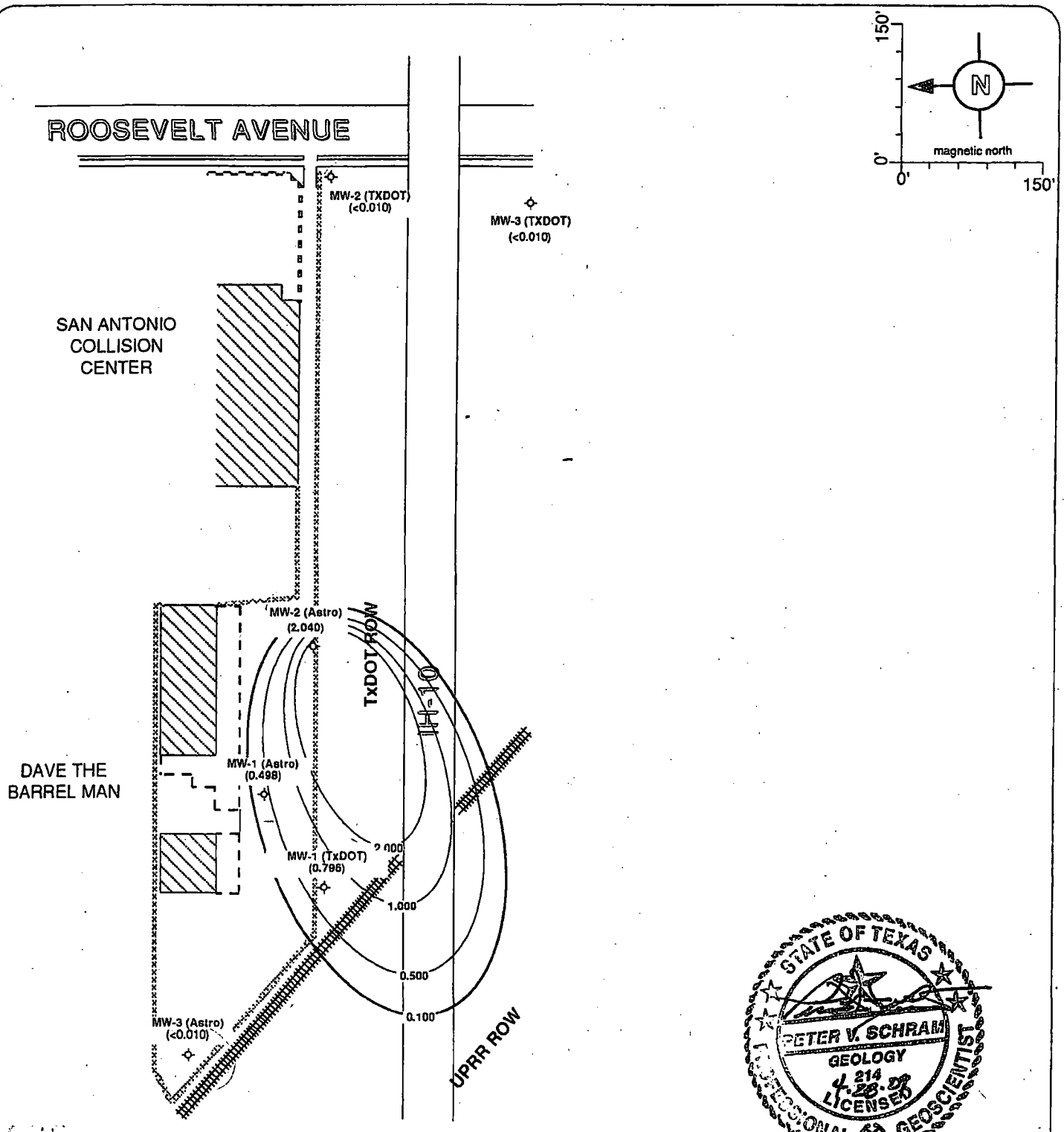
030012

NOTE: all concentrations in mg/L
"Critical PCL" = 2.000 mg/L
NO EXCEEDENCE

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW CONCENTRATION ISOPLETH - Ba (7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
4214
LICENSED
PROFESSIONAL GEOSCIENTIST

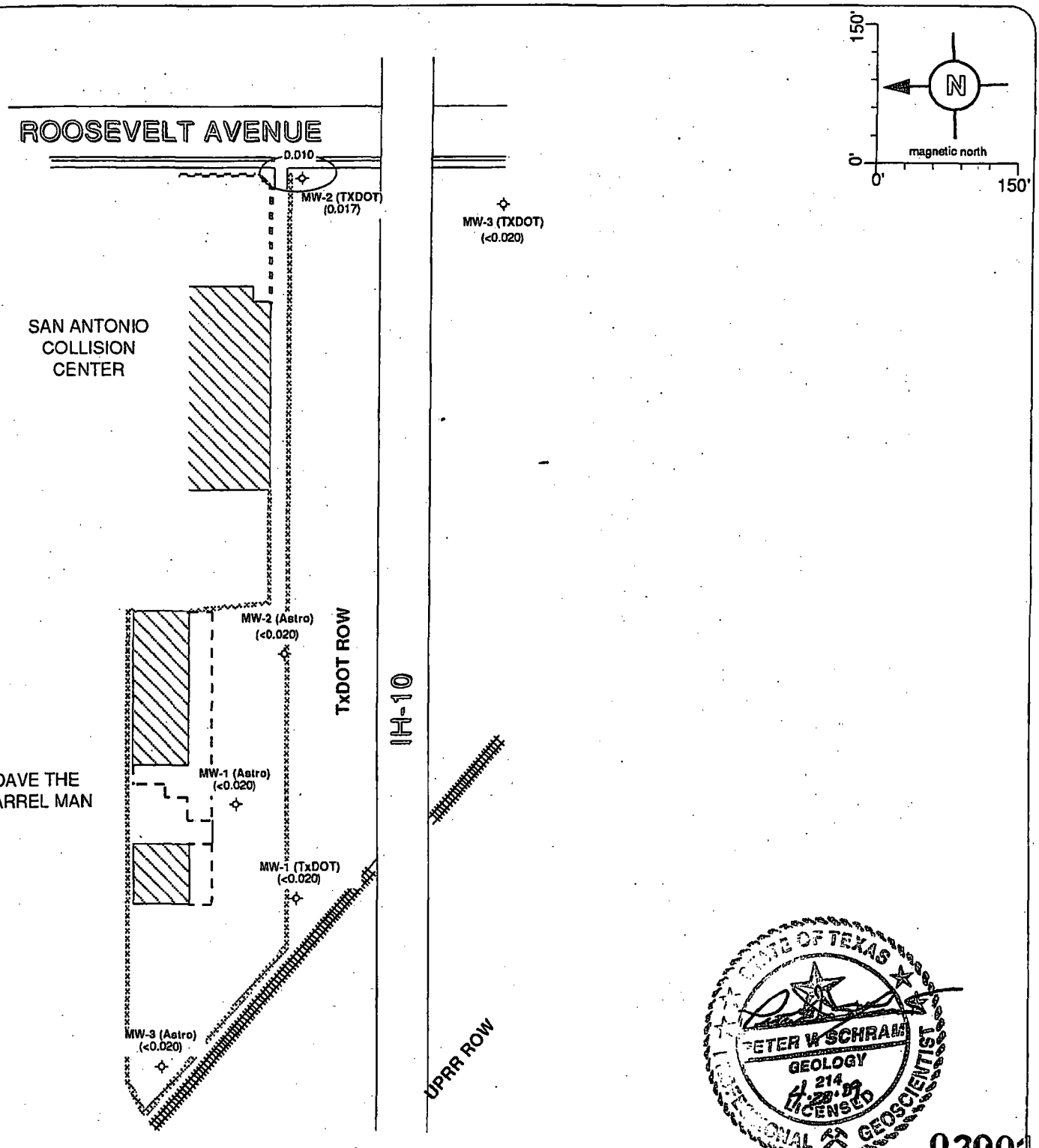
030013

NOTE: all concentrations in mg/L
"Critical PCL" = 0.100 mg/L
EXCEEDENCE "highlighted"

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW CONCENTRATION ISOPLETH - Cr (7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER W SCHRAM
GEOLOGY
214
LICENSED
PROFESSIONAL GEOSCIENTIST

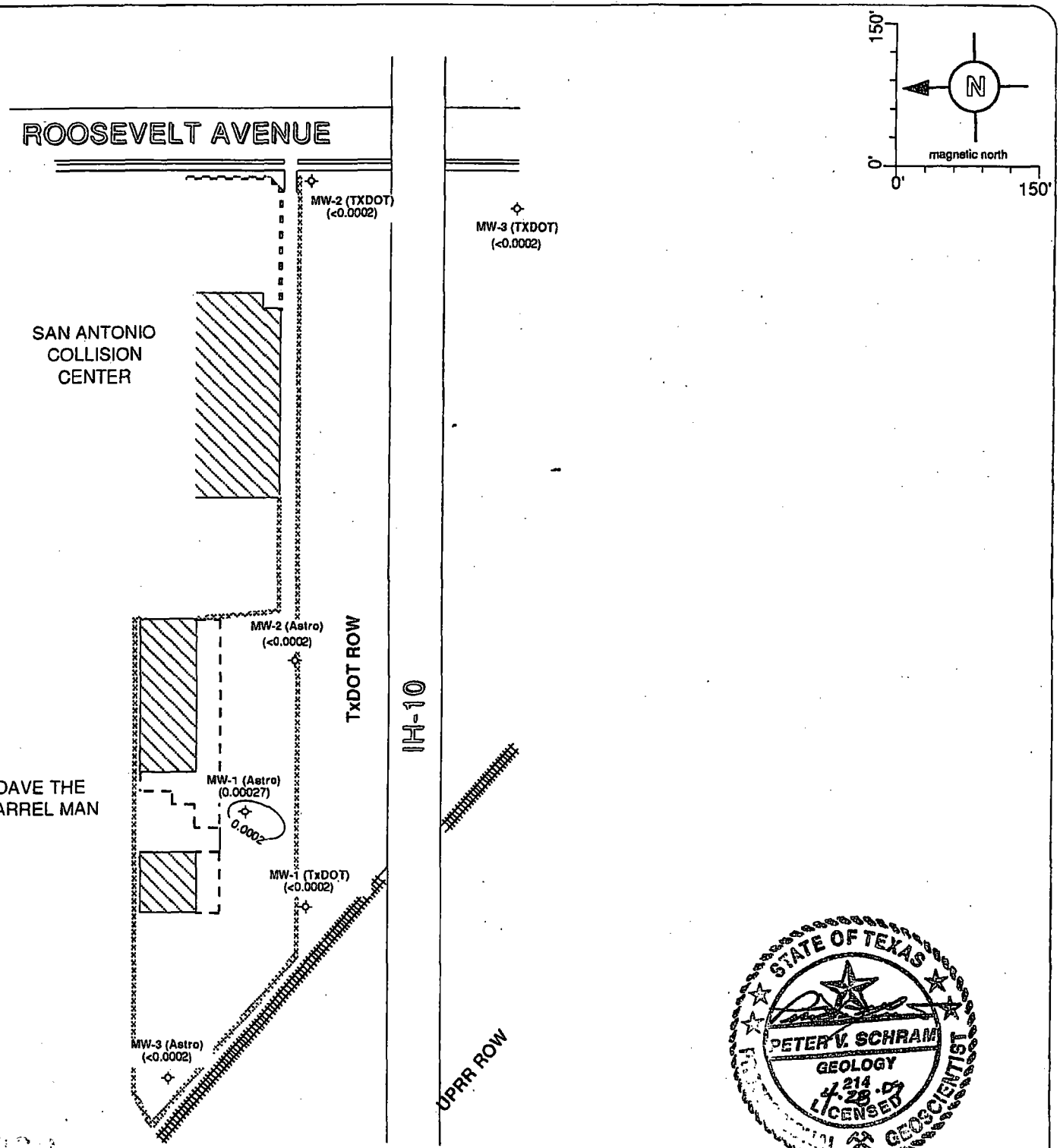
0300:4

NOTE: all concentrations in mg/L
"Critical PCL" = 1.30 mg/L
NO EXCEEDENCE

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW CONCENTRATION ISOPLETH - Cu (7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
214
LICENSED
GEOSCIENTIST

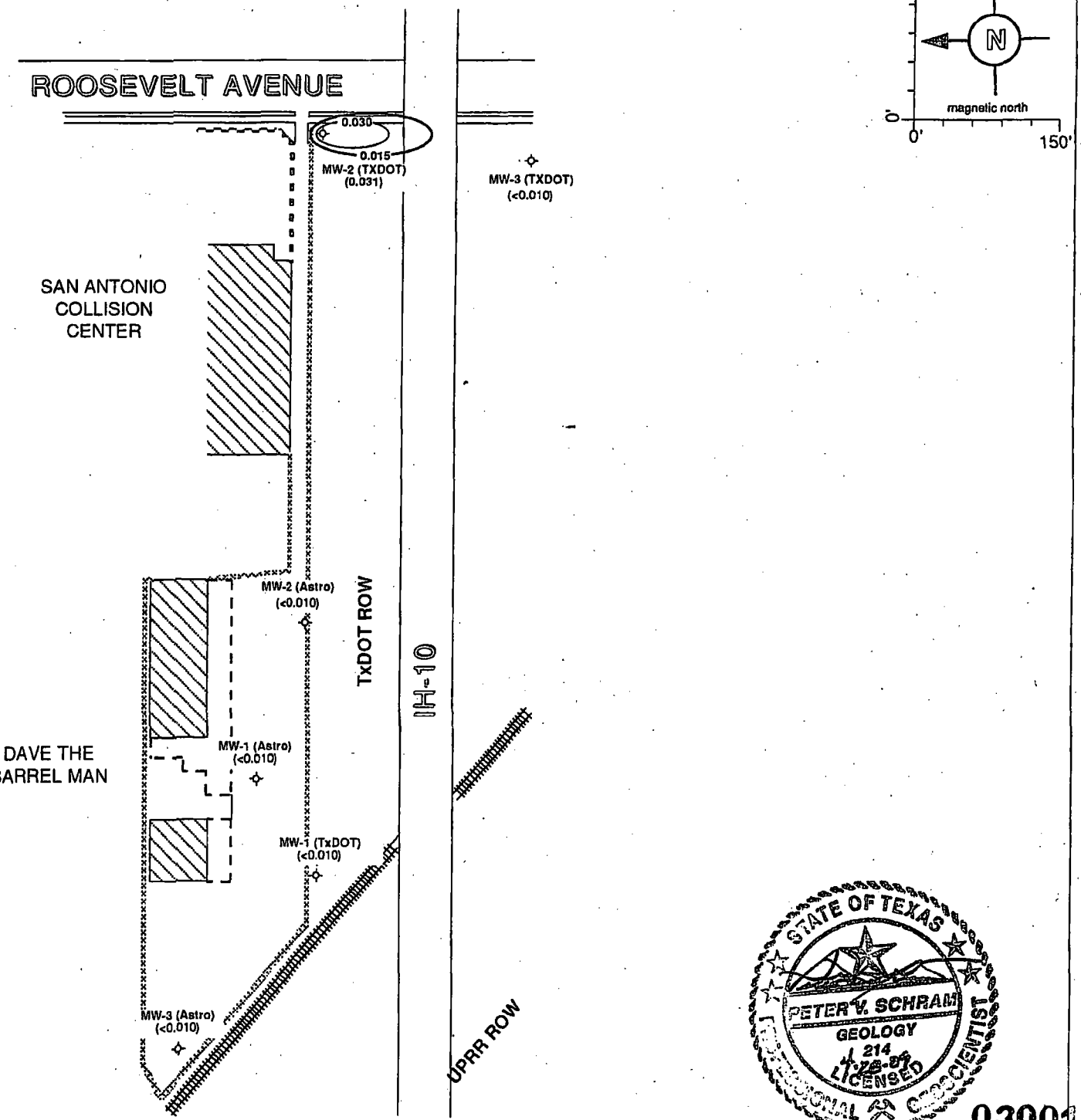
030045

NOTE: all concentrations in mg/L
"Critical PCL" = 0.002 mg/L
NO EXCEEDENCE

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW
CONCENTRATION
ISOPLETH - Hg
(7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - RCAS00037



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
214
4-28-09
LICENSED
PROFESSIONAL GEOSCIENTIST

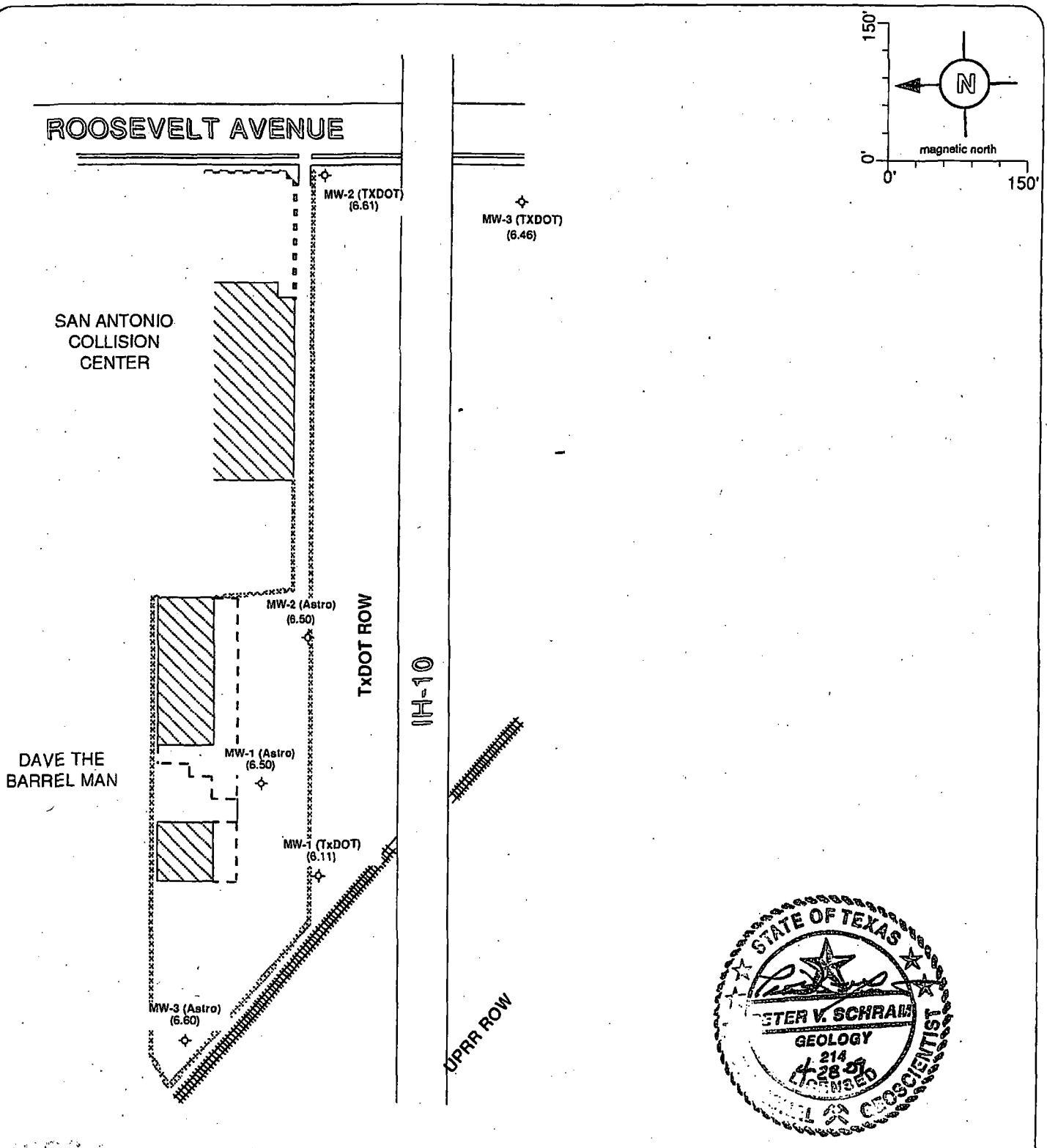
030016

NOTE: all concentrations in mg/L
"Critical PCL" = 0.015 mg/L
EXCEEDENCE "highlighted"

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW
CONCENTRATION
ISOPLETH - Pb
(7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
214
LICENSED
PROFESSIONAL GEOSCIENTIST

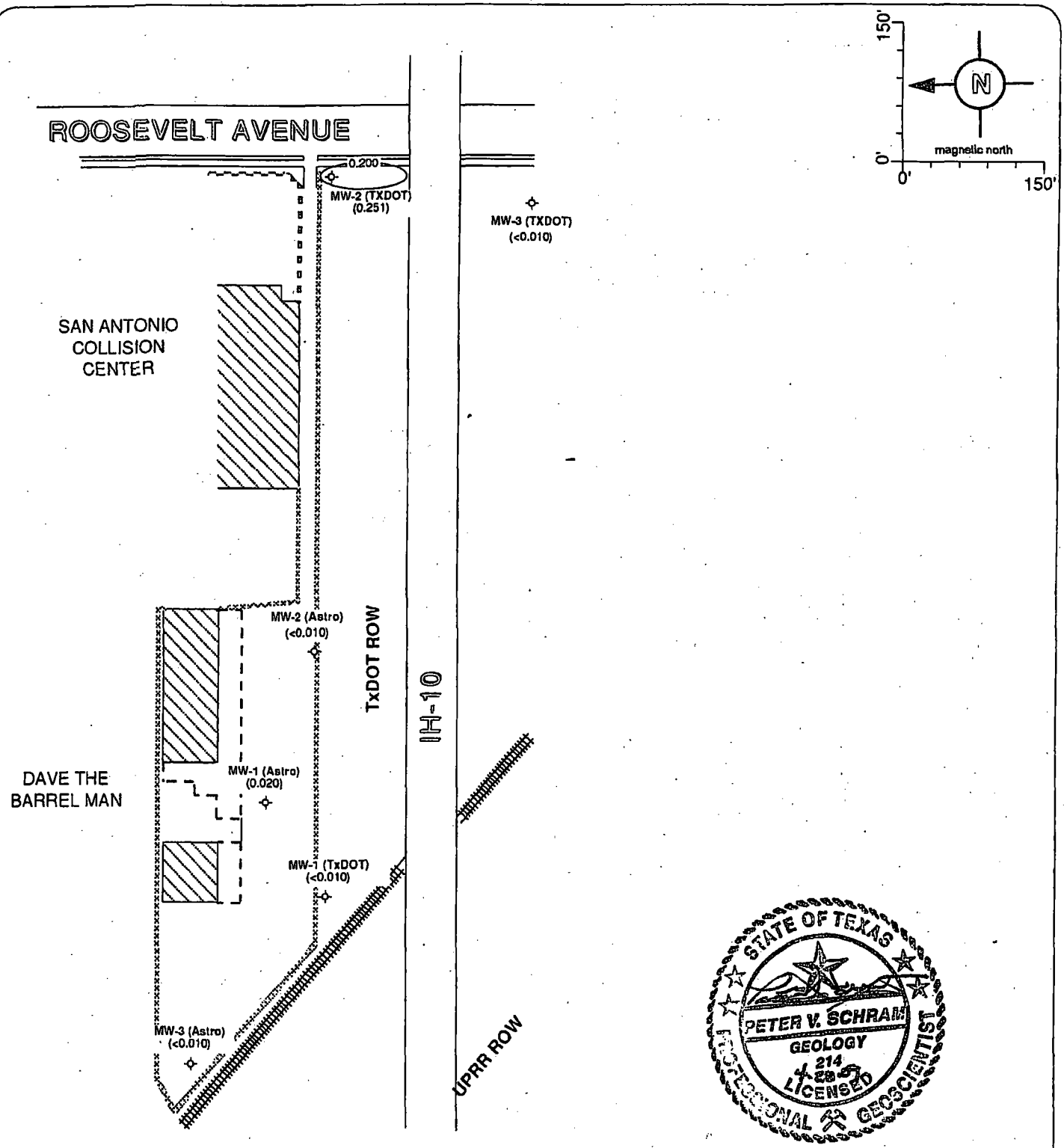
030017

NOTE: all concentrations in su

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW
CONCENTRATION
ISOPLETH - pH
(7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



STATE OF TEXAS
PETER V. SCHRAM
GEOLOGY
214
LICENSED
PROFESSIONAL GEOSCIENTIST

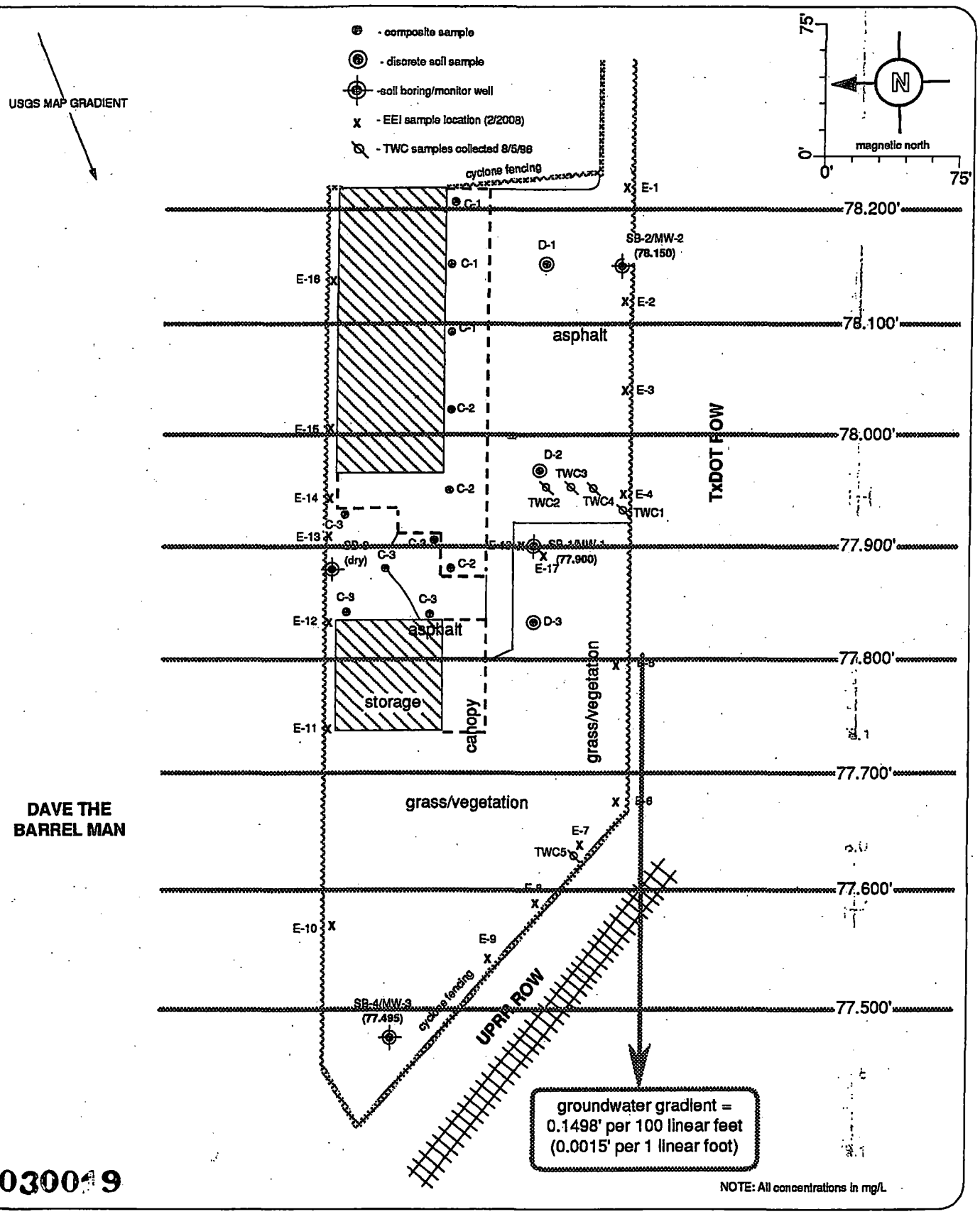
030018

NOTE: all concentrations in mg/L
"Critical PCL" = 7.3 mg/L
NO EXCEEDENCE

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GW
CONCENTRATION
ISOPLETH - Zn
(7/7/08-2/13/09)

EXTRA ENVIRONMENTAL, INC. - *RCAS00037*



030019

NOTE: All concentrations in mg/L

ASTRO PLATING, INC.
915 ROOSEVELT AVENUE
SAN ANTONIO, TEXAS

GROUNDWATER GRADIENT MAP (07/07/2008)

EXTRA ENVIRONMENTAL, INC. - RCAS00037

SAN ANTONIO TESTING LABORATORY, INC.

ACCREDITED IN ACCORDANCE WITH nelac

Extra Environmental

2426 Freedom Drive
San Antonio, TX 78217
ATTN: P. Schram

Date/Time Received: 2/13/2009 4:17 PM

Date Reported: 2/26/2009

Project Name: Astro Plating
Project No.:

Additional Info:

Report No.: 0902-162

REPORT OF CHEMICAL ANALYSIS

Sample ID #: 1 MW-1 **Sampling Method:** Grab

Sample Matrix: Liquid **Date/Time Collected:** 2/13/2009 2:57 PM

Parameter	Results	MQL	Flag	MDL	SQL[SDL]	Units	Analysis Method	Prep Date	Date Analyzed	Analyst
Chemistry										
Cyanide-Total	N.D.	0.02		0.017		mg/L	4500CNe	2/20/2009	2/20/2009	MSR
pH	6.11	0.1				su	4500H+	2/13/2009	2/13/2009	MM
Metals										
Total Antimony	N.D.	0.01		0.0063	0.0063	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Arsenic	N.D.	0.01		0.0044	0.0044	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Beryllium	N.D.	0.004		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Thallium	N.D.	0.01		0.0032	0.0032	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Barium	0.254	0.01		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Cadmium	N.D.	0.005		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Chromium	0.796	0.01		0.0011	0.0011	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Copper	N.D.	0.02		0.0021	0.0021	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Lead	N.D.	0.01		0.005	0.005	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Nickel	N.D.	0.01		0.0013	0.0013	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Selenium	N.D.	0.01		0.004	0.004	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Silver	N.D.	0.05		0.0038	0.0038	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Zinc	N.D.	0.01		0.0006	0.0006	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Mercury	N.D.	0.0002		3.5E-05	3.5E-05	mg/L	245.1	2/17/2009	2/17/2009	ID

REPORT OF CHEMICAL ANALYSIS

Sample ID #: 2 MW-2 **Sampling Method:** Grab

Sample Matrix: Liquid **Date/Time Collected:** 2/13/2009 3:11 PM

Parameter	Results	MQL	Flag	MDL	SQL[SDL]	Units	Analysis Method	Prep Date	Date Analyzed	Analyst
Chemistry										
Cyanide-Total	N.D.	0.02		0.017		mg/L	4500CNe	2/20/2009	2/20/2009	MSR
pH	6.61	0.1				su	4500H+	2/13/2009	2/13/2009	MM
Metals										
Total Thallium	N.D.	0.01		0.0032	0.0032	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Antimony	N.D.	0.01		0.0063	0.0063	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Arsenic	N.D.	0.01		0.0044	0.0044	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Beryllium	N.D.	0.004		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Barium	0.566	0.01		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Cadmium	N.D.	0.005		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Chromium	N.D.	0.01		0.0011	0.0011	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Copper	0.017	0.02	J	0.0021	0.0021	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Lead	0.031	0.01		0.005	0.005	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Nickel	0.017	0.01		0.0013	0.0013	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Selenium	N.D.	0.01		0.004	0.004	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Silver	N.D.	0.05		0.0038	0.0038	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Zinc	0.251	0.01		0.0006	0.0006	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Mercury	N.D.	0.0002		3.5E-05		mg/L	245.1	2/17/2009	2/17/2009	ID

Report No.: 0902-162

REPORT OF CHEMICAL ANALYSIS

Sample ID #: 3 MW-3 **Sampling Method:** Grab

Sample Matrix: Liquid **Date/Time Collected:** 2/13/2009 3:24 PM

Parameter	Results	MQL	Flag	MDL	SQL[SDL]	Units	Analysis Method	Prep Date	Date Analyzed	Analyst
Chemistry										
Cyanide-Total	N.D.	0.02		0.017		mg/L	4500CNe	2/20/2009	2/20/2009	MSR
pH	6.46	0.1				su	4500H+	2/13/2009	2/13/2009	MM
Metals										
Total Antimony	N.D.	0.01		0.0063	0.0063	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Thallium	N.D.	0.01		0.0032	0.0032	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Arsenic	N.D.	0.01		0.0044	0.0044	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Beryllium	N.D.	0.004		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Barium	0.165	0.01		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Cadmium	N.D.	0.005		0.001	0.001	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Chromium	N.D.	0.01		0.0011	0.0011	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Copper	N.D.	0.02		0.0021	0.0021	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Lead	N.D.	0.01		0.005	0.005	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Nickel	N.D.	0.01		0.0013	0.0013	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Selenium	N.D.	0.01		0.004	0.004	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Silver	N.D.	0.05		0.0038	0.0038	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Zinc	N.D.	0.01		0.0006	0.0006	mg/L	200.7	2/17/2009	2/18/2009	ID
Total Mercury	N.D.	0.0002		3.5E-05		mg/L	245.1	2/17/2009	2/17/2009	ID

QUALITY CONTROL DATA

PARAMETER	BLANK	UNITS	SPIKE AMT	LCS %REC	LCSD %REC	LCS/LCSD LIMITS	MS %REC	MSD %REC	MS/MSD LIMITS	QC RESULTS	QC DUP RESULTS	RPD	RPD LIMIT
Chemistry													
QC Sample ID	0902-193-1												
Cyanide	<0.02	mg/L	0.1	91	86	80-120	-	-	-	<0.02	<0.02	6	20
QC Sample ID	0902-162-1												
pH	-	su	4	99	-	80-120	-	-	-	6.11	6.17	1	20
Metals													
QC Sample ID	0902-155-1												
Antimony	<0.01	mg/L	2	103	-	80-120	104	-	70-130	<0.01	<0.01	<1	20
Beryllium	<0.004	mg/L	2	106	-	80-120	104	-	70-130	<0.004	<0.004	<1	20
Thallium	<0.01	mg/L	2	103	-	80-120	100	-	70-130	<0.01	<0.01	<1	20
Arsenic	<0.01	mg/L	2	107	-	80-120	110	-	70-130	<0.01	<0.01	<1	20
Barium	<0.01	mg/L	2	102	-	80-120	112	-	70-130	0.12	0.109	10	20
Cadmium	<0.005	mg/L	2	108	-	80-120	106	-	70-130	<0.005	<0.005	<1	20
Chromium	<0.01	mg/L	2	103	-	80-120	103	-	70-130	<0.01	<0.01	<1	20
Copper	<0.02	mg/L	2	105	-	80-120	110	-	70-130	<0.02	<0.02	<1	20
Lead	<0.01	mg/L	2	107	-	80-120	107	-	70-130	<0.01	<0.01	<1	20
Nickel	<0.01	mg/L	2	106	-	80-120	104	-	70-130	<0.01	<0.01	<1	20
Selenium	<0.01	mg/L	2	114	-	80-120	117	-	70-130	<0.01	<0.01	<1	20
Silver	<0.05	mg/L	1	110	-	80-120	109	-	70-130	<0.05	<0.05	<1	20
Zinc	<0.01	mg/L	2	108	-	80-120	111	-	70-130	0.043	0.045	5	20
QC Sample ID	0902-126-6												
Mercury	<0.0002	mg/L	0.005	100	-	85-115	88	-	80-120	<0.0002	<0.0002	<1	20

Notes:

Hg The holding time is 28 days
Metals The holding time is 180 days

Definitions:

N.D. This qualifier indicates that the analyte was analyzed but not detected above the MDL
J This qualifier indicates that the analyte is an estimate value between the MQL and MDL
SQL Sample Quantitation Limit
MQL Method Quantitation Limit
MDL Method Detection Limit

REPORT OF CHEMICAL ANALYSIS

mg/L	Milligrams per Liter [Parts per Million]
su	Standard Units
Test Methods:	Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983 Standard Methods for the Examination of Water and Wastewater, 20th Edition 1998 EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

NELAC Accredited by TCEQ - Certificate No.: T104704360-08A-TX
Effective Date: 07/01/2008 Expiration Date: 06/30/2009
Visit: www.satestinglab.com/foa.html for a list of Fields of Accreditation

Richard Hawk
General Manager

SAN ANTONIO
TESTING LABORATORY, INC.

Attachment A Laboratory Data Package Signature Page

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- R1 – Field Chain-of-Custody Documentation;
- R2 – Sample Identification Cross-reference;
- R3 – Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
- R4 – Surrogate Recovery Data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
- R5 – Test Reports/Summary Forms for Blank Samples;
- R6 – Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
- R7 – Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC limits
- R8 – Laboratory Analytical Duplicate (if applicable) Recovery and Precision:
  a) the amount of analyte measured in the duplicate,
  b) the calculated RPD, and
  c) the laboratory's QC limits for analytical duplicates.
- R9 – List of Method Quantitation Limits (MQLs) for each analyte for each method and matrix
- R10 – Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement:

I am the laboratory director, or their designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge, that all problems/anomalies, observed by this laboratory that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

Signature :	Irene Davila	**Date:**	**02/24/09**
Name:	**Irene Davila**	**Official Title:**	**Analytical Chemist**
Project Name:	**Astro Plating**	**Analysis:**	**Metals**
Laboratory Job Number:	**0902-162**	**Matrix:**	**Liquid**

SAN ANTONIO TESTING LABORATORY, INC.

Attachment A (cont'd): Laboratory Review Checklist: Reportable Data			
Laboratory Name:	San Antonio Testing Laboratory, Inc.	LRC Date:	02/24/09
Project Name:	Astro Plating	Laboratory Job Number:	0902-162
Reviewer Name:	Irene Davila	Prep Batch Number(s):	TX21709L1, M21709L1, Hg21709L1

#' (1)	A(2)	Description	Yes	No	NA	NR	ER#
RI	OI	CHAIN-OF-CUSTODY (C-O-C)	–	–	–	–	–
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION	–	–	–	–	–
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	*TEST REPORTS*	–	–	–	–	–
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?	X				
		7) Were % moisture (or solids) reported for all soil and sediment samples?	X				
		8) If required for the project, TICs reported?			X		
R4	O	SURROGATE RECOVERY DATA	–	–	–	–	–
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
RS	OI	TEST REPORTS/SUMMMARY FORMS FOR BLANK SAMPLES	–	–	–	–	–
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	LABORATORY CONTROL SAMPLES (LCS):	–	–	–	–	–
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits?			X		
R7	OI	MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA	–	–	–	–	–
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	ANALYTICAL DUPLICATE DATA	–	–	–	–	–
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	METHOD QUANTITATION LIMITS (MQLS):	–	–	–	–	–
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	OTHER PROBLEMS/ANOMALIES	–	–	–	–	–
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?/			X		
		3) If requested, is the justification for elevated SQLs documented?			X		

1 Items identified by the letter "R" should be included in the laboratory data package submitted in the TRRP-required reports. Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3 NA = Not applicable; –
4 NR = Not Reviewed;
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if 'NR" or "No" is checked).

SAN ANTONIO TESTING LABORATORY, INC.

Attachment A (cont'd): Laboratory Review Checklist: Reportable Data			
Laboratory Name:	San Antonio Testing Laboratory, Inc.	LRC Date:	02/24/09
Project Name:	Astro Plating	Laboratory Job Number:	0902-162
Reviewer Name:	Irene Davila	Prep Batch Number(s):	TX21709L1, M21709L1, Hg21709L1

# (1)	A(2)	Description	Yes	No	NA	NR	ER#
S1	OI	INITIAL CALIBRATION (ICAL)	–	–	–	–	–
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICCV AND CCV) AND	–	–	–	–	–
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	MASS SPECTRAL TUNING:	–	–	–	–	–
		1) Was the appropriate compound for the method used for tuning?			X		
		2) Were ion abundance data within the method-required QC limits?			X		
S4	O	INTERNAL STANDARDS (IS):	–	–	–	–	–
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR	–	–	–	–	–
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?			X		
S6	O	DUAL COLUMN CONFIRMATION	–	–	–	–	–
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	TENTATIVELY IDENTIFIED COMPOUNDS (TICS):	–	–	–	–	–
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	INTERFERENCE CHECK SAMPLE (ICS) RESULTS:	–	–	–	–	–
		Were percent recoveries within method QC limits?	X				
S9	I	SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD	–	–	–	–	–
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	PROFICIENCY TEST REPORTS:	–	–	–	–	–
		Are proficiency testing or inter-laboratory comparison results on file?	X				
S11	OI	METHOD DETECTION LIMIT (MDL) STUDIES	–	–	–	–	–
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S12	OI	STANDARDS DOCUMENTATION	–	–	–	–	–
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	COMPOUND/ANALYTE IDENTIFICATION PROCEDURES	–	–	–	–	–
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	DEMONSTRATION OF ANALYST COMPETENCY (DOC)	–	–	–	–	–
		1) Was DOC conducted consistent with NELAC 5C or ISO/EEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS	–	–	–	–	–
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/EEC 17025 Section 5.4.5)?	X				
S16	OI	LABORATORY STANDARD OPERATING PROCEDURES (SOPS):	–	–	–	–	–
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o the TRRP-required reports. Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
5 NA = *Not applicable;*
6 NR = Not Reviewed;
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

SAN ANTONIO TESTING LABORATORY, INC.

Attachment A (cont'd): Laboratory Review Checklist: Reportable Data			
Laboratory Name:	San Antonio Testing Laboratory, Inc.	LRC Date:	02/24/09
Project Name:	Astro Plating	Laboratory Job Number:	0902-162
Reviewer Name:	Irene Davila	Prep Batch Number(s):	TX21709L1, M21709L1, Hg21709L1

ER# (1)	DESCRIPTION

(1) ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC).

SAN ANTONIO TESTING LABORATORY, INC.

2/26/2009 *INVOICE* *0902-162*

Bill To	Project Name/ Location
Extra Environmental 2426 Freedom Dr. San Antonio, TX 78217 ATTN: Accounts Payable	Astro Plating

Final Inv. By:	P.O. Number	Terms	Due Date	Project No.
All		Net 30	3/28/2009	

Qty	Item	Entry By:	Description	Rate	Amount
3	pH	All	Chemistry	10.00	30.00
3	Cyanide	All	Chemistry	35.00	105.00
3	T Copper	All	ICP	15.00	45.00
3	Antimony	All	ICP	15.00	45.00
3	T Arsenic	All	ICP	15.00	45.00
3	T Barium	All	ICP	15.00	45.00
3	T Beryllium	All		15.00	45.00
3	T Cadmium	All	ICP	15.00	45.00
3	T Chromium	All	ICP	15.00	45.00
3	T Lead	All	ICP	15.00	45.00
3	T Mercury	All	Cold Vapor	25.00	75.00
3	T Nickel	All	ICP	15.00	45.00
3	T Selenium	All	ICP	15.00	45.00
3	T Silver	All	ICP	15.00	45.00
3	T Thallium	All	ICP	15.00	45.00
3	T Zinc	All	ICP	15.00	45.00
		All	Subtotal		795.00
	TRRP 13	All	TRRP 13 Laboratory Data Package	5.00%	39.75
				Total	$834.75

To ensure proper credit please include invoice number and date on your check.
CHECKS WILL BE PROCESSED ELECTRONICALLY.

1610 S. Laredo Street, San Antonio, Texas 78207-7029
(210) 229-9920 Fax (210) 229-9921
www.satestinglab.com

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, INC.

1610 S. Laredo Street, San Antonio, Texas 78207
(210) 229-9920 • Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY Extra Environmental	COMPANY	REPORT NUMBER 0902-162
ADDRESS 2426 Freedom Drive	ADDRESS Same	
CITY San Antonio STATE Tx ZIP 78217	CITY STATE ZIP	FAX # 829-8271
ATTN: PV Schram PHONE # 829-7137	ATTN: Bill Beatz PHONE # 829-7137	E-MAIL

PROJECT NAME/LOCATION/SITE: Arrow Plating

PROJECT NO.:

SAMPLED BY: PV Schram

REQUESTED TURNAROUND TIME (begins at Log-In): ☑ 7-10 Business Days ☐ 3-5 Business Days ☐ 2 Business Days ☐ Next Business Day ☐ SAME DAY WHEN POSSIBLE

TRRP 13 REQUEST ☑ YES ☐ NO

COMMENTS/SPECIAL REQUESTS:

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ☐ YES ☑ NO
PROPER CONTAINERS ☑ YES ☐ NO

IF NO, SIGN HERE TO AUTHORIZE ANALYSIS: [signature]

TEMP. ON RECPT. 24.8 C

COND. OF SAMPLE: Not Iced

ANALYSIS REQUESTED: BTEX / MTBE (8260); TPH (TX1005 / TX1006); METALS 8 / 11 / 12 / 13 / TCLP / SPLP; PAH / SVOC / (8270 / 625 / TCLP / SPLP); VOC / (8260 / 624 / TCLP / SPLP); Cd / Cr / Pb - Tot / TCLP / SPLP; RT. MINERALS; COLI / TC / FC / HPC; 17 Total *; Cyanide

PRESERVED WITH: ICE; HCl; H_2SO_4; HNO_3; NaOH; $Na_2S_2O_3$; PRESERVED IN THE LAB; COMPOSITED IN THE LAB

SAMPLE NUMBER	DATE	TIME	MATRIX	SAMPLING METHOD	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	ANALYSIS REQUESTED	PRESERVED WITH	REMARKS
1	2/13/09	1457	✓ (Drinking Water)	✓ (Grab)	MW-1	3	1125	✓ ✓ ✓	X X X	
2	2/13/09	1511	✓ (Drinking Water)	✓ (Grab)	MW-2	↓	↓	✓ ✓ ✓	↓	
3	2/13/09	1524	✓ (Drinking Water)	✓ (Grab)	MW-3	↓	↓	✓ ✓ ✓	X X X	

*Total Copper, Total Antimony, Total Arsenic, Total Barium, Total Beryllium, Total Cadmium, Total Chromium, Total Lead, Total Mercury, Total Nickel, Total Selenium, Total Silver, Total Thallium, Total Zinc.

02-13-09 16:17 IN

RELINQUISHED BY (SIGNATURE): [signature]	DATE / TIME: 2.13-09	RECEIVED BY (SIGNATURE): [signature]	
RELINQUISHED BY (PRINT NAME): Peter V. Schram		RECEIVED BY (PRINT NAME): Amie Garland	
RELINQUISHED BY (SIGNATURE)		RECEIVED BY (SIGNATURE)	
RELINQUISHED BY (PRINT NAME)		RECEIVED BY (PRINT NAME)	
RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	
RELINQUISHED BY (PRINT NAME)		RECEIVED BY (PRINT NAME)	
METHOD OF SHIPMENT: Hand		TO BE SENT OUT ☐ YES ☑ NO	
		CUSTODY SEAL IN PLACE & INTACT ☐ YES ☑ NO	

FORM: COC REV 05/07 WHITE - LAB CANARY - CLIENT Rev. 11/07

030020

SAN ANTONIO TESTING LABORATORY, INC.

Sample Receipt Checklist

Client: Extra — Report Number: 0902-162

Project Name: — Date Received: 2-13-09

Shipped via ☐FedEx ☐UPS ☐Lonestar ☑Hand Delivered ☐DHL ☐Other — Date Due: 2-24-09

Rush: ☐ Specify: 7 days

Items to be checked upon Receipt: [Yes, No, N/A]

	Yes	No	NA
1. Custody Seals present?		✓	
2. Custody Seals intact?		✓	
3. Air Bill included in folder, if received?		✓	
4. Is COC included with samples?	✓		
5. Is COC signed and dated by client?	✓		
6. Sample temperature acceptable [>0°C and <6° C]?			
7. Samples received with ice ✓ ☐ ice packs ☐ neither ☑			
8. Is the COC filled out correctly and completely?	✓		
9. Information on the COC matches the samples?	✓		
10. Samples received within holding time?	✓		
11. Samples properly labeled?	✓		
12. Samples properly preserved?	✓		
13. Proper sample containers used?	✓		
14. Samples received intact?	✓		
15. VOA vials received with no air bubbles?		✓	
16. Sample volume sufficient for requested analysis?	✓		
17. All samples received?	✓		
18. Subcontracted Samples: [if Yes, complete the next section]		✓	

Temp: 24.8 °C Just taken

Analyses Sent For: _____ No. of Samples _____

Samples sent to: _____ Sent By: _____

Date samples sent: _____ Samples shipped via: _____

TAT Requested: _____

Tracking number [if any]: _____

Comments:

Received By: Amiel — Date: 2-13-09

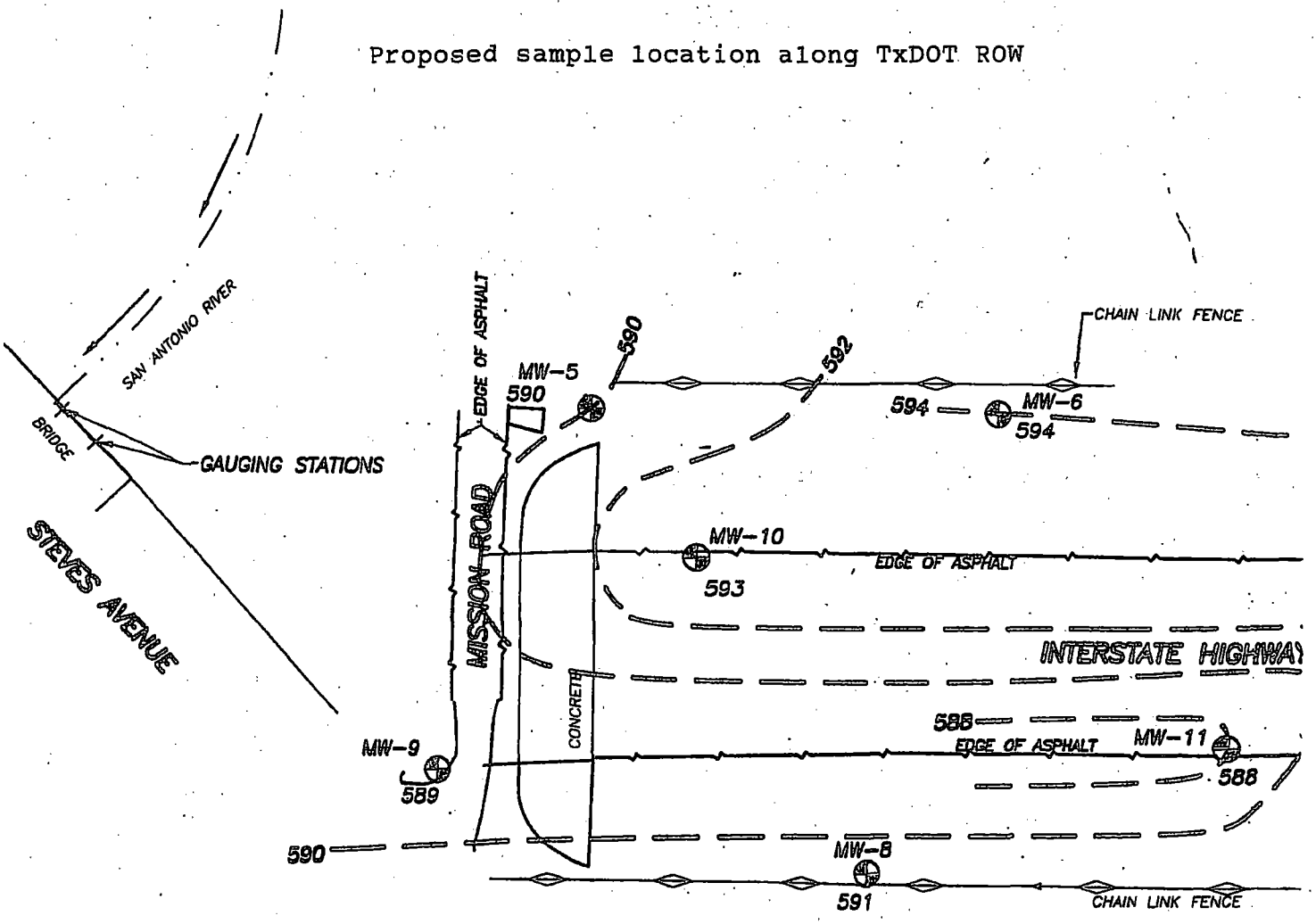
Labeled By: [illegible] — Date: _____

Logged into LIMS By: [illegible] — Date: _____

Logged into RF By: [illegible] — Date: _____

1610 S. Laredo Street, San Antonio, Texas 78207-7029 • (210) 229-9920 • Fax (210) 229-9921

Proposed sample location along TxDOT ROW



NOTES:

1. BASE MAP BASED ON SURVEY BY NORTHSTAR LAND SURVEYING IN OCTOBER, 1995. ALL DP, MW, MT & SB LOCATIONS, EDGES OF ASPHALT & BRIDGES, SAN ANTONIO RIVER GAUGING STATIONS, CHAIN LINK FENCES, RAILROAD, & CONCRETE ARE SURVEYED. THE LOCATIONS OF ALL OTHER FEATURES ARE APPROXIMATED.
2. THE BASE OF THE QUATERNARY-AGE FLUVIATILE TERRACE DEPOSITS (TERRACE DEPOSITS) MAY ALSO BE REFERRED TO AS THE CONTACT OF THE TERRACE DEPOSITS WITH THE UNDERLYING NAVARRO GROUP CLAY. THIS FEATURE IS ABBREVIATED HEREIN AS "CONTACT".

LEGEND:

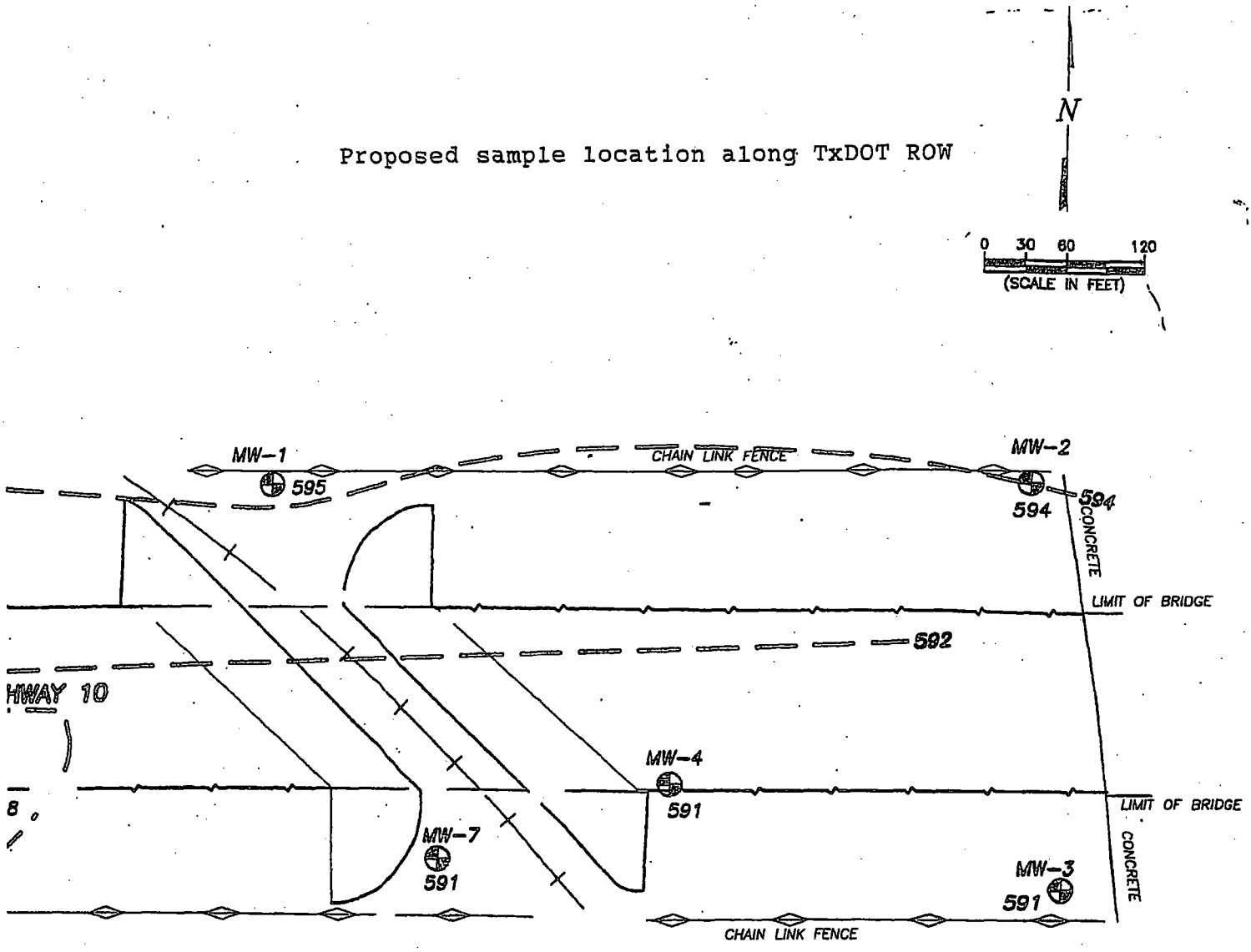
MW-1 — MONITORI LOCATION

594 — CONTACT (IN FEET OF TRANS

594 — CONTACT

ASTRO PLATING
SWR ID No. 37656
CEI & SPL 2002
Attachment 3
Page 440

Proposed sample location along TxDOT ROW



ITORING WELL
ATION

TACT ELEVATION ROUNDED TO NEAREST FOOT
FEET RELATIVE TO TEXAS DEPARTMENT
TRANSPORTATION HIGHWAY DATUM)

TACT ELEVATION CONTOUR

REV. NO.	DATE	DESCRIPTION	DR BY	APP

BASE OF TERRACE DEPOSITS CONTOUR MAP

TEXAS DEPARTMENT OF TRANSPORTATION SAN ANTONIO, TEXAS

Huntingdon — Huntingdon Engineering & Environmental, Inc.

REFERENCE NO:	1809501758.03
DRAWING NO:	50175812
DATE ISSUED:	02-10-1996

FIGURE NO. 4-2

ASTRO PLATING
SWR ID No. 37656
CEI & SPL 2002
Attachment 3
Page 441

Send original copy by certified mail to: TNRCC, P.O. Box 13087, Austin, TX 78711-3087 *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Counc
P.O. Box 13087
Austin, Tx. 78711-3087
512-239-0530

1) **OWNER** Texas DOT (NAME) **ADDRESS** P.O. Box 29928 (Street or RFD) San Antonio (City) TX (State) 78234 (Zip)

2) **ADDRESS OF WELL:** County Bexar IH 10 & Mission Road (Street or RFD) San Antonio (City) TX (State) 78234 (Zip) **STATE GRID #**

3) **TYPE OF WORK (Check):** [x] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) **PROPOSED USE (Check):** [x] Monitor [ ] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) **WELL LOG:** MW-1
Date Drilling Started 8/21 19 95 Completed: 9/7 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0	26

7) **DRILLING METHOD (Check):** [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [x] Other HOLLOW STEM AUGER

From(ft.)	To(ft.)	Description and color of formation material
0	21	Clay to Gravelly Clay
21	26	Sandy Gravel to Clay

8) **Borehole Completion (Check):** [ ] Open Hole [ ] Straight Wall [ ] Underreamed [x] Gravel Packed [ ] Other
If gravel packed give interval ... from 9 ft. to 26 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting	Gage Screen
2	N	PVC RISER	0	11	SCH 40	
2	N	PVC SCREEN	11	26		.010
		PVC TRAP				

9) **CEMENTING DATA** [RULE 338.44(1)]
Cemented from 0 ft. to 1 ft. No. of sacks used
Bentonite 1 ft. to 9 ft. No. of sacks used
Method used
Cemented by Adrian Soriano
Distance to septic system field lines ft.
Method of verification of above distance

13) **TYPE PUMP:** N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder [ ] Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) **WELL TESTS:** N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: gpm with ft. drawdown after hrs.

10) **SURFACE COMPLETION**
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[x] Approved Alternative Procedure Used [Rule 338.71]

11) **WATER LEVEL:** N/A
Static level ft. below land surface Date
Artesian flow gpm. Date

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [x] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [ ] No

12) **PACKERS:** N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GEOPROJECTS INTERNATIONAL INC. (Type or print) **WELL DRILLER'S LICENSE NO.** 4943M

ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) Adrian Soriano (Licensed Well Driller) **(Signed)** (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if ava

TNRCC-0199 (Rev. 09-01-93) TNRCC COPY 0200 2

Send original copy by certified mail to TNRCC, P.O. Box 13087, Austin, TX 78711-3087 — *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Cc
P.O. Box 13087
Austin, Tx. 78711-3087
512-239-0530

1) **OWNER** Texas DOT (NAME) **ADDRESS** PO Box 29928 (Street or RFD) San Antonio (City) TX (State) 78234 (Zip)

2) **ADDRESS OF WELL:** County Bexar — IH 10 & Mission Road (Street or RFD) San Antonio (City) TX (State) 78234 (Zip) **STATE GRID #** 68-37-7

3) **TYPE OF WORK (Check):** [x] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) **PROPOSED USE (Check):** [x] Monitor [ ] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) **WELL LOG:** MW-2
Date Drilling Started 9/5 19 95 Completed: 9/5 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0	26

7) **DRILLING METHOD (Check):** [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [x] Other HOLLOW STEM AUGER

N

From(ft.)	To(ft.)	Description and color of formation material
0	15	Clay
15	22	Gravelly Clay
22	26	Very stiff, moist, Clay

8) **Borehole Completion (Check):** [ ] Open Hole [ ] Straight Wall [ ] Underreamed [x] Gravel Packed [ ] Other
If gravel packed give interval ... from 9 ft. to 26 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (In.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
2	N	PVC RISER	0	11	SCH 40
2	N	PVC SCREEN	11	26	.010
		PVC TRAP			

9) **CEMENTING DATA** [RULE 338.44(1)]
Cemented from 0 ft. to 2 ft. No. of sacks used
Bentonite 2 ft. to 9 ft. No. of sacks used
Method used
Cemented by Adrian Soriano
Distance to septic system field lines ft.
Method of verification of above distance

13) **TYPE PUMP:** N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder [ ] Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) **WELL TESTS:** N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: gpm with ft. drawdown after hrs.

10) **SURFACE COMPLETION**
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[x] Approved Alternative Procedure Used [Rule 338.71]

11) **WATER LEVEL:** N/A
Static level ft. below land surface Date
Artesian flow gpm. Date

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [x] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [ ] No

12) **PACKERS:** N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) Adrian Soriano (Licensed Well Driller) **(Signed)** (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if ava

TNRCC-0199 (Rev. 09-01-93) TNRCC COPY

030025

REFERENCE 4

Central Registry

Detail of: **IHW Corrective Action Solid Waste Registration 37656**
For: **ASTRO PLATING SAN ANTONIO (RN100551985)**
915 ROOSEVELT AVE, SAN ANTONIO
Solid Waste Registration Status: **ACTIVE**

Correspondence Tracking

Tracking No.	Received/Sent	Direction	Type	Subject	Due Date	End Date	Document Date	Method
12821202	08/28/2009	OUTGOING	APPROVAL			08/28/2009		
12733180	06/22/2009	INCOMING	TECHNICAL CORRESPONDENCE	NOTIF FOR PROPOSED MON WELL SAMPLING	07/22/2009	07/16/2009	06/19/2009	
12684862	05/08/2009	INCOMING	GW/MEDIA MONITORING RPT	GW SAMPLING RESULTS	09/05/2009	08/28/2009	05/07/2009	
12584132	01/27/2009	INCOMING	TECHNICAL CORRESPONDENCE	10-DAY FORMAL NOTIF FOR PROPOSED WELL SAMP	02/26/2009	02/26/2009	01/26/2009	
12502202	10/01/2008	OUTGOING	APPROVAL			10/01/2008		
12435754	09/03/2008	INCOMING	INVESTIGATION RPT	INTERIM RPT	01/01/2009	10/01/2008	08/27/2008	
10785104	10/28/2004	OUTGOING	LATE LETTER 1			10/28/2004		
10785104	10/28/2004	OUTGOING	LATE LETTER 1			10/28/2004		
10671306	07/01/2004	OUTGOING	LATE LETTER 1			07/01/2004		
1102928	12/10/2001	OUTGOING	COMMENTS/NOD			12/10/2001		USPS
1102928	12/10/2001	OUTGOING	COMMENTS/NOD			12/10/2001		USPS

040001

1077175	09/10/2001	INCOMING	UNIT CLOSURE PLAN	CLOSURE PLAN SUBMITTED PER AO PROV 2CI CARF=9/10/0	12/09/2001	12/10/2001	10/01/2000	INTRA-AGENCY
1077175	09/10/2001	INCOMING	UNIT CLOSURE PLAN	CLOSURE PLAN SUBMITTED PER AO PROV 2CI CARF=9/10/0	12/09/2001	12/10/2001	10/01/2000	INTRA-AGENCY

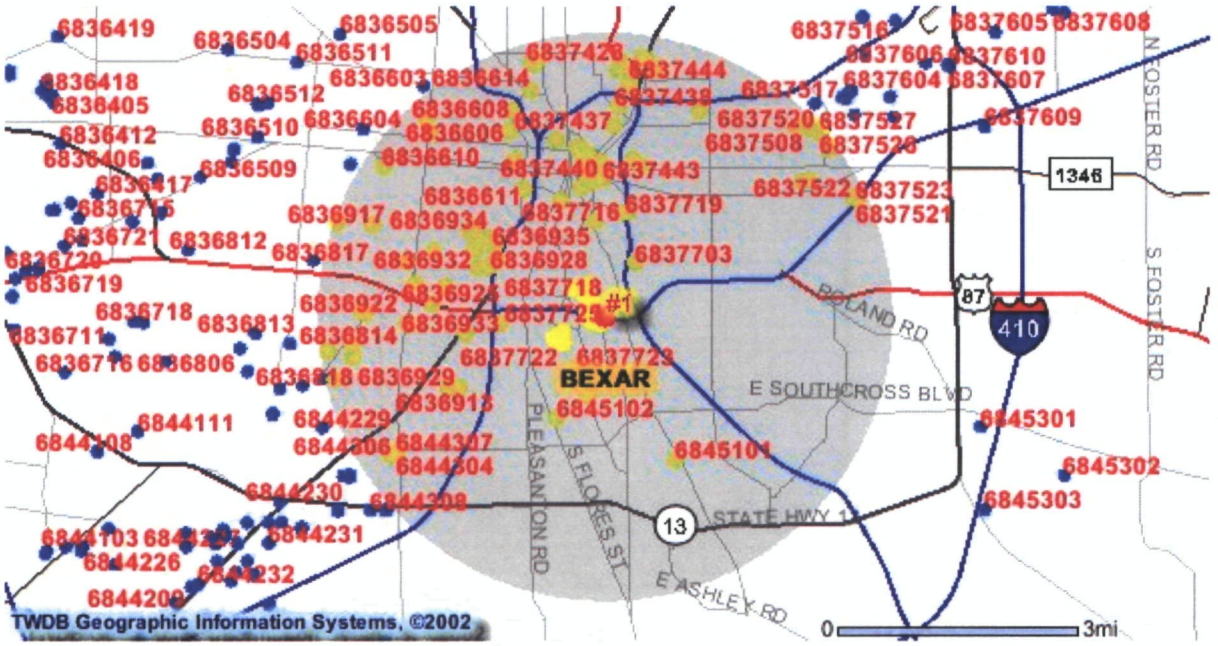
040002

REFERENCE 5

Texas Water Development Board

Water Information Integration & Dissemination System

Water Well Locations



Legend

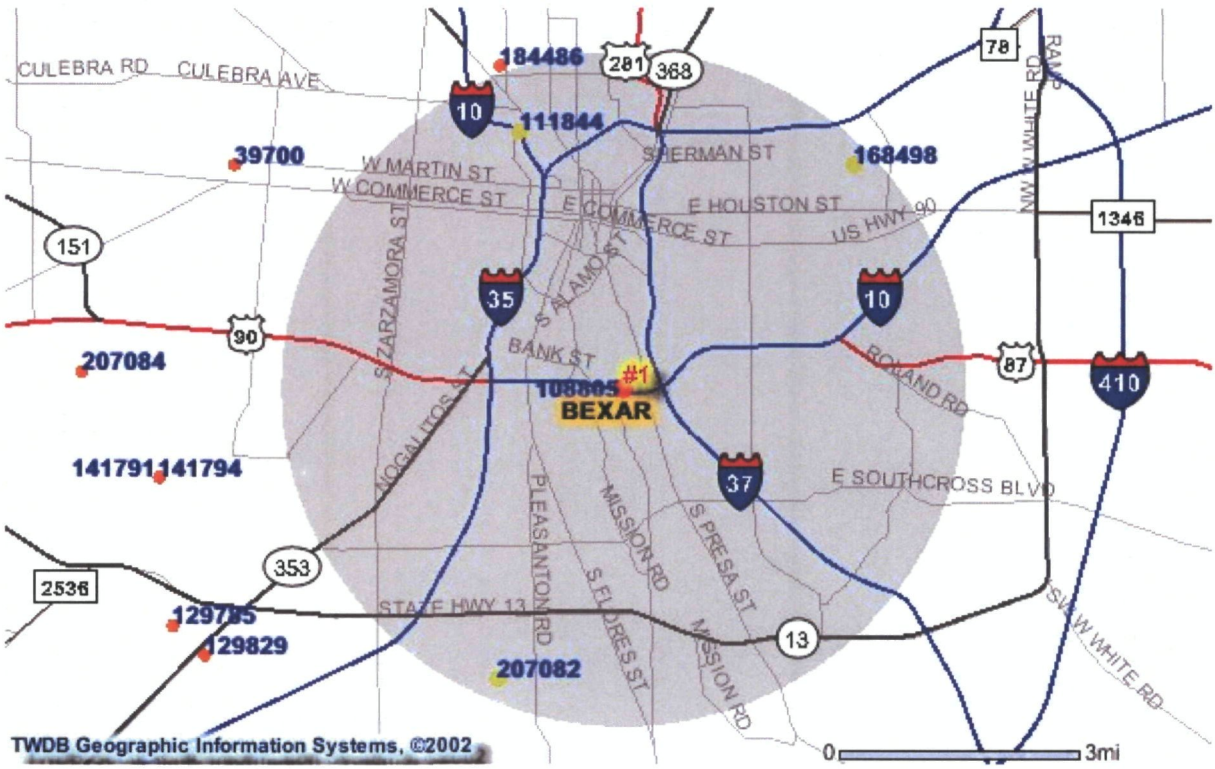
- theSBLayer
- Selected Features
- TWDB Groundwater Data
- State Hwy
- FM & RM Roads
- Other State Roads
- Interstate Hwy
- US Hwy
- Counties
- Major Streets

05 01

Texas Water Development Board

Water Information Integration & Dissemination System

Water Well Locations



Legend

- theSBLayer
- Selected Features
- Submitted Driller's Reports
- State Hwy
- FM & RM Roads
- Other State Roads
- Interstate Hwy
- US Hwy
- Counties
- Major Streets

050003

TWDB Groundwater Database Query Result

REPORTED WATER WELL DATA ON STATE WELL NUMBER = 6845101

Query for another State Well Number: [ ] Submit

| Water Quality | Infrequent Constituent | Water Level | 5 Day Water Level | Well Casing | Remarks | Scanned Images |

*For a complete explanation, click here to read the TWDB Groundwater Data System Data Dictionary.

Field	Value	*Explanation
STATE WELL NUMBER	6845101	
COUNTY CODE	29	Bexar County, Texas
BASIN	19	San Antonio River Basin
PREVIOUS WELL NUMBER	J-50	
LATITUDE	292156	DMS (in decimal degrees: 29.365556)
LAT DEC	29.365555	
LONGITUDE	982813	DMS (in decimal degrees: -98.470278)
LONG DEC	-98.470277	
OWNER 1	Hot Wells Tourist	
OWNER 2	Lodges	
DRILLER 1		
DRILLER 2		
SOURCE OF COORDINATES	1	
AQUIFER CODE	218EBFZA	EDWARDS AND ASSOCIATED LIMESTONES - (BALCONES FAULT ZONE AQUIFER)
AQUIFER ID1	11	Edwards (BFZ) Aquifer
AQUIFER ID2		
AQUIFER ID3		
ELEVATION	562	feet

050005

ELEVATION MEASUREMENT METHOD	M	Interpolated From Topo Map
ALPHA CODE		
DATE DRILLED		
WELL TYPE	S	Spring
WELL DEPTH	1878	feet
SOURCE OF DEPTH	R	Person Other than Owner
TYPE OF LIFT	N	None
TYPE OF POWER		
HORSEPOWER		
PRIMARY WATER USE	C	Commercial
SECONDARY WATER USE		
TERTIARY WATER USE		
WATER LEVEL AVAILABLE	N	
WATER QUALITY AVAILABLE	Y	Click here for water quality data
WELL LOGS AVAILABLE		
OTHER DATA AVAILABLE		
DATE COLLECTED OR UPDATED	05211976	
REPORTING AGENCY	01	TWDB or Predecessor Agency
WELL SCHEDULE IN FILE	Y	
CONTRUCTION METHOD		
COMPLETION	X	Open Hole
CASING MATERIAL	S	Steel
SCREEN MATERIAL		
GMA	10	
RWPA	L	
DISTRICTID	199610LX	

Groundwater Database Disclaimer

050006

The Groundwater Database (GWDB) of the Texas Water Development Board (TWDB) contains

information about more than 123,500 water well, spring, and oil/gas test sites in Texas including associated water level and water quality data. Because data collection methods and data maintenance have varied and evolved over the years, the information in the GWDB has a range of accuracy that the user needs to be aware of. See Explanation of Groundwater Data for information on the sources of information and level of accurracy in the document.

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059007

TWDB Groundwater Database Query Result

REPORTED WATER WELL DATA ON STATE WELL NUMBER = 6836801

Query for another State Well Number: [ ] Submit

| Water Quality | Infrequent Constituent | Water Level | 5 Day Water Level | Well Casing | Remarks | Scanned Images |

*For a complete explanation, click here to read the TWDB Groundwater Data System Data Dictionary.

Field	Value	*Explanation
STATE WELL NUMBER	6836801	
COUNTY CODE	29	Bexar County, Texas
BASIN	19	San Antonio River Basin
PREVIOUS WELL NUMBER		
LATITUDE	292454	DMS (in decimal degrees: 29.415000)
LAT DEC	29.415	
LONGITUDE	983251	DMS (in decimal degrees: -98.547500)
LONG DEC	-98.547499	
OWNER 1	San Fernando Cemetery	
OWNER 2		
DRILLER 1	J. R. Johnson	
DRILLER 2	Drilling & Supplies	
SOURCE OF COORDINATES	1	
AQUIFER CODE	218EDRDA	EDWARDS AND ASSOCIATED LIMESTONES
AQUIFER ID1	11	Edwards (BFZ) Aquifer
AQUIFER ID2		
AQUIFER ID3		
ELEVATION	680	feet
ELEVATION MEASUREMENT METHOD	M	Interpolated From Topo Map

050008

ALPHA CODE		
DATE DRILLED	09001950	
WELL TYPE	W	Withdrawal of Water
WELL DEPTH	1270	feet
SOURCE OF DEPTH	D	Driller's Log
TYPE OF LIFT	T	Turbine Pump
TYPE OF POWER	E	Electric Motor
HORSEPOWER	100.00	
PRIMARY WATER USE	I	Irrigation
SECONDARY WATER USE		
TERTIARY WATER USE		
WATER LEVEL AVAILABLE	M	Click here for water level data
WATER QUALITY AVAILABLE	N	
WELL LOGS AVAILABLE	D	
OTHER DATA AVAILABLE		
DATE COLLECTED OR UPDATED	03071974	
REPORTING AGENCY	01	TWDB or Predecessor Agency
WELL SCHEDULE IN FILE	Y	
CONTRUCTION METHOD		
COMPLETION	X	Open Hole
CASING MATERIAL	S	Steel
SCREEN MATERIAL		
GMA	10	
RWPA	L	
DISTRICTID	199610LX	

Groundwater Database Disclaimer

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TWDB Groundwater Database Query Result

REPORTED WATER WELL DATA ON STATE WELL NUMBER = 6836614

Query for another State Well Number: [ ] Submit

| Water Quality | Infrequent Constituent | Water Level | 5 Day Water Level | Well Casing | Remarks | Scanned Images |

*For a complete explanation, click here to read the TWDB Groundwater Data System Data Dictionary.

Field	Value	*Explanation
STATE WELL NUMBER	6836614	
COUNTY CODE	29	Bexar County, Texas
BASIN	19	San Antonio River Basin
PREVIOUS WELL NUMBER	ED97-12B	
LATITUDE	292649	DMS (in decimal degrees: 29.446944)
LAT DEC	29.446944	
LONGITUDE	983005	DMS (in decimal degrees: -98.501389)
LONG DEC	-98.501388	
OWNER 1	San Parks & Recreation	
OWNER 2	San Pedro spring 4d	
DRILLER 1		
DRILLER 2		
SOURCE OF COORDINATES	1	
AQUIFER CODE	218EBFZA	EDWARDS AND ASSOCIATED LIMESTONES - (BALCONES FAULT ZONE AQUIFER)
AQUIFER ID1	11	Edwards (BFZ) Aquifer
AQUIFER ID2		
AQUIFER ID3		

0500-1

ELEVATION	666	feet
ELEVATION MEASUREMENT METHOD	M	Interpolated From Topo Map
ALPHA CODE		
DATE DRILLED		
WELL TYPE	S	Spring
WELL DEPTH		
SOURCE OF DEPTH		
TYPE OF LIFT		
TYPE OF POWER		
HORSEPOWER		
PRIMARY WATER USE	R	Recreation
SECONDARY WATER USE		
TERTIARY WATER USE		
WATER LEVEL AVAILABLE	N	
WATER QUALITY AVAILABLE	Y	Click here for water quality data
WELL LOGS AVAILABLE		
OTHER DATA AVAILABLE		
DATE COLLECTED OR UPDATED	07091997	
REPORTING AGENCY	02	US GEOLOGICAL SURVEY
WELL SCHEDULE IN FILE	Y	
CONTRUCTION METHOD		
COMPLETION		
CASING MATERIAL		
SCREEN MATERIAL		
GMA	10	
RWPA	L	
DISTRICTID	199610LX	

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050013

Submitted Driller's Reports

Rec	OBJECT	Tracking Number	Well Owner	County	Well Address	Well City	Zip Code	Date of Well Completion	Undesirable Water Quality	Well Type	Latitude	Longitude	area	len
1	46466852	108805	L & H Packing Company	Bexar	675 Steves	San Antonio	78210	Fri, 30 Mar 2007 00:00:00	no	Industrial	292336	982914	0	0
2	46469686	111844	Peter & Patricia Herrera	Atascosa	3500 CR 422	Pleasanton	78064	Fri, 13 Apr 2007 00:00:00	no	Domestic	292621	983019	0	0
3	46525480	168498	San Antonio Water System	Bexar	Colisem Rd. (Artesia Well Field)	San Antonio	78218	Wed, 9 Jan 2008 00:00:00	no	Public Supply	292558	982627	0	0
4	46563707	207082	Carl Jones	Wilson	9580 FM 1303	Floresville	78114	Mon, 18 Jan 2010 00:00:00	no	Domestic	292045	983039	0	0

STATE OF TEXAS WELL REPORT for Tracking #168498

Owner:	**San Antonio Water System**	Owner Well #:	**Artesia # 5**
Address:	**2800 US Hwy 281 N. San Antonio , TX 78212**	Grid #:	**68-37-5**
Well Location:	**Colisem Rd. (Artesia Well Field) San Antonio , TX 78218**	Latitude:	**29° 25' 58" N**
Well County:	**Bexar**	Longitude:	**098° 26' 27" W**
Elevation:	**660 ft.**	GPS Brand Used:	**Garmin 72**
Type of Work:	**Reconditioning**	Proposed Use:	**Public Supply; Plans Approved by TCEQ**

Drilling Date: Started: **1/8/2008**
Completed: **1/9/2008**

Diameter of Hole: Diameter: **30 in From Surface To 208 ft**
Diameter: **26 in From 208 ft To 760 ft**

Drilling Method: Other: **Set 26" Liner**

Borehole Completion: Other: **Reline Existing Well**

Annular Seal Data: 1st Interval: **From +3 ft to 208 ft with 260 sks classH (#sacks and material)**
2nd Interval: **No Data**
3rd Interval: **No Data**
Method Used: **Tremmie Pipe**
Cemented By: **Slumberger Oil Field Services**
Distance to Septic Field or other Concentrated Contamination: **N/A ft**
Distance to Property Line: **500 ft**
Method of Verification: **Legal Plot & Fencing**
Approved by Variance: **No Data**

Surface Completion: **Surface Slab Installed**

Water Level: Static level: **+ 20 ft. below land surface on 1/9/2008**
Artesian flow: **3,000 GPM**

Packers: **26" X 30" Cement Basket at 208'**

Plugging Info: Casing or Cement/Bentonite left in well: **No Data**

Type Of Pump: **Turbine**
Depth to pump bowl: **120 ft**

Well Tests: **Pump**
Yield: **7,500 GPM with 12 ft drawdown after 12 hours**

Water Quality: Type of Water: **Edwards**
Depth of Strata: **920 to 1412 ft.**
Chemical Analysis Made: **Yes**
Did the driller knowingly penetrate any strata which contained undesirable constituents: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller

05005

understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:	**Peerless Equipment LTD.** **5400 Hwy 90 West** **San Antonio , TX 78227**
Driller License Number:	**4365**
Licensed Well Driller Signature:	**Raymundo V. Garcia**
Registered Driller Apprentice Signature:	**No Data**
Apprentice Registration Number:	**No Data**
Comments:	**Well had hole in top 30" Casing. We ran a 26" Liner to top of 26" Swadge & Cemented in Place.** **TWDB SW# 68-37-506** **Doc Jones 8/21/09**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking **#168498**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL	CASING, BLANK PIPE & WELL SCREEN DATA
From (ft) To (ft) Description	Dia. New/Used Type Setting From/To
Edwards Well	**26 in. New Carbon Steel Blank Pipe Set From +3' to 208'**

0500'6

Groundwater Database Query Result

REPORTED WATER LEVEL DATA ON STATE WELL NUMBER = 6837714

Query for another State Well Number: [ ] Submit

| Water Quality | Infrequent Constituent | Water Level | 5 Day Water Level | Well Casing | Remarks | Scanned Images |

Click here to read the TWDB GroundWater Data System Data Dictionary for explanation.

No.	STATE WELL NUMBER	PUBLISHABLE/NON-PUBLISHABLE	DEPTH FROM LAND SURFACE	MONTH	DAY	YEAR	MEASUREMENT NUMBER	MEASURING AGENCY	METHOD OF MEASUREMENT	REMARK
1	6837714	P	-28	3	16	1951	01			

Go Back

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050017

0 - 1/4 mile radius

SUBMITTED DRILLER'S REPORTS

Rec	OBJECT	Tracking Number	Well Owner	County	Well Address	Well City	Zip Code	Date of Well Completion	Undesirable Water Quality	Well Type	Latitude	Longitude	area	len
1	48950408	108805	L & H Packing Company	Bexar	675 Steves	San Antonio	78210	Fri, 30 Mar 2007 00:00:00	no	Industrial	292336	982914	0	0

TWDB GROUNDWATER DATA *(Explanation)*

Rec	OBJECT	State Well Number	Owner	Water Use	Elevation	Well Depth	Water Level	Water Quality	Aquifer Code	Latitude	Longitude	COUNTY_CODE	WELL_TYPE	area	len
1	51072963	6837714	L & H Packing Co!	G	612	1260	M	Y	218EDRDA	292339	982921	29	W	0	0
2	51072969	6837720	L & H Packing Co.	G	610	1286	N	N	218EDRDA	292341	982923	29	W	0	0
3	51072974	6837725	L & H Packing	N	614	1430	N	N	218EBFZA	292337	982914	29	W	0	0

(½-mile radius) TWDB GROUNDWATER DATA *(Explanation)*

Rec	OBJECT	State Well Number	Owner	Water Use	Elevation	Well Depth	Water Level	Water Quality	Aquifer Code	Latitude	Longitude	COUNTY_CODE	WELL_TYPE	area	len
1	51072953	6837704	Lone Star Brewery	N	622	1617	M	Y	218EBFZA	292359	982927	29	W	0	0
2	51072961	6837712	Lone Star Brewery	N	622	1400	N	N	218EDRDA	292403	982925	29	W	0	0
3	51072963	6837714	L & H Packing Co.	G	612	1260	M	Y	218EDRDA	292339	982921	29	W	0	0
4	51072964	6837715	San Antonio Public	N	610	1052	M	Y	218EBFZA	292355	982921	29	W	0	0
5	51072967	6837718	City Public Service	U	610	1000	N	N	218EDRDA	292356	982922	29	W	0	0
6	51072969	6837720	L & H Packing Co.	G	610	1286	N	N	218EDRDA	292341	982923	29	W	0	0
7	51072970	6837721	L & H Packing Co.	N	613	1475	N	N	218EBFZA	292342	982925	29	W	0	0
8	51072974	6837725	L & H Packing	N	614	1430	N	N	218EBFZA	292337	982914	29	W	0	0

(1 mile radius) TWDB GROUNDWATER DATA *(Explanation)*

Rec	OBJECT	State Well Number	Owner	Water Use	Elevation	Well Depth	Water Level	Water Quality	Aquifer Code	Latitude	Longitude	COUNTY_CODE	WELL_TYPE	area	len
1	51072951	6837701	San Antonio Water Sys.	P	601	1582	N	Y	218EBFZA	292326	982951	29	W	0	0
2	51072952	6837703	Southern-Henke Ice.	N	635	1350	N	Y	218EBFZA	292421	982844	29	W	0	0
3	51072953	6837704	Lone Star Brewery	N	622	1617	M	Y	218EBFZA	292359	982927	29	W	0	0
4	51072954	6837705	San Antonio Water Sys.	P	601	1800	M	Y	218EBFZA	292329	982948	29	W	0	0
5	51072955	6837706	San Antonio Water Sys.	P	604	1521	M	Y	218EBFZA	292330	982946	29	W	0	0
6	51072956	6837707	Newell Salvage Co.	N	627	1103	M	N	218EBFZA	292403	982935	29	W	0	0
7	51072957	6837708	San Antonio Water Sys.	P	601	1400	N	Y	218EBFZA	292326	982952	29	W	0	0
8	51072958	6837709	San Antonio Water Sys.	P	600	1361	N	Y	218EBFZA	292327	982950	29	W	0	0
9	51072959	6837710	San Antonio Water Sys.	P	601	1510	N	Y	218EBFZA	292326	982949	29	W	0	0

10	51072960	6837711	San Antonio Water Sys.	P	604	1500	N	Y	218EBFZA	292331	982945	29	W	0	0
11	51072961	6837712	Lone Star Brewery	N	622	1400	N	N	218EDRDA	292403	982925	29	W	0	0
12	51072962	6837713	Lone Star Brewery	U	621	972	N	N	218EDRDA	292405	982924	29	W	0	0
13	51072963	6837714	L & H Packing Co.	G	612	1260	M	Y	218EDRDA	292339	982921	29	W	0	0
14	51072964	6837715	San Antonio Public	N	610	1052	M	Y	218EBFZA	292355	982921	29	W	0	0
15	51072966	6837717	San Antonio Water Sys.	G	600	1841	N	N	218EBFZA	292326	982951	29	W	0	0
16	51072967	6837718	City Public Service	U	610	1000	N	N	218EDRDA	292356	982922	29	W	0	0
17	51072969	6837720	L & H Packing Co.	G	610	1286	N	N	218EDRDA	292341	982923	29	W	0	0
18	51072970	6837721	L & H Packing Co.	N	613	1475	N	N	218EBFZA	292342	982925	29	W	0	0
19	51072971	6837722	San Antonio Water Sys	U	603	2110	N	Y	218EBFZA	292323	982945	29	O	0	0
20	51072972	6837723	San Antonio Water Sys	U	600	1900	N	Y	218EBFZA	292306	982933	29	O	0	0
21	51072974	6837725	L & H Packing	N	614	1430	N	N	218EBFZA	292337	982914	29	W	0	0

(Entry Point)							
Entry Point	EP Name/Source Summation (Activity Status)	Plant Name (Activity Status)	WUD Plant Num	Chemical Mon Type	Chem Sample Point	Distribution Mon Type	Dist Sample Point
002	**SAMPLE TAP / EDWARDS(A)**	**MISSION CHLORINATOR()**	**578**		**No**		**No**

Train:	**(Unnamed)**

(Treatments)				
Disinfection Zone	Treatment Sequence	Objective	Process	Treatment
	1	**D**	**403**	**GASEOUS CHLORINATION(PRE)**
	2	**Z**	**380**	**FLUORIDATION**

(Active Sources)						
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018M	**MISSION 1(A)**	**O**	**G**	**1582**	**6944**	**8194**
Drill Date	Well Data					
0/0/1951	**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller	
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**	
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018P	**MISSION 2(A)**	**O**	**G**	**1400**	**4931**	**5902**
Drill Date	Well Data					
4/0/1945	**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller	
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**	
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018Q	**MISSION 3(A)**	**O**	**G**	**1361**	**4931**	**5902**
Drill Date	Well Data					
0/0/1948	**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller	
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**	
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018R	**MISSION 4(A)**	**O**	**G**	**1510**	**6944**	**8194**
Drill Date	Well Data					
8/30/1952	**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller	
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**	
Source Number	Source Name (Activity Status)	Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018N	**MISSION 5(A)**	**O**	**G**	**1800**	**7153**	**8472**

Drill Date		Well Data					
11/4/1957		**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller		
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**		
Source Number	Source Name (Activity Status)		Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018O	**MISSION 6(A)**		**O**	**G**	**1521**	**8000**	**8472**

Drill Date		Well Data					
5/10/1957		**EDWARDS AND ASSOCIAT**					
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller		
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**		
Source Number	Source Name (Activity Status)		Operational Status	Source Type	Depth	Tested GPM	Rated GPM
G0150018S	**MISSION 7(A)**		**O**	**G**	**1550**	**4500**	**8472**

Drill Date		Well Data			
3/14/1974		**EDWARDS AND ASSOCIAT**			
GPS Latitude (decimal)	GPS Longitude (decimal)	GPS Elevation	GPS Date	GPS Cert. No.	Seller
Not Available	**Not Available**	**Not Available**	**Not Available**	**Not Available**	**Not a Purchased Source**

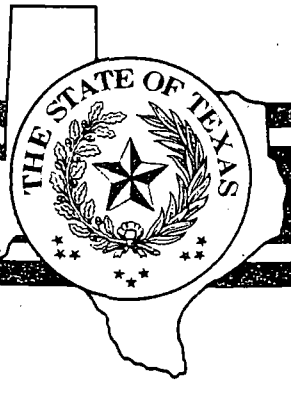
(Inactive/Offline Sources)
(No inactive Sources associated with this EP/Plant)

REFERENCE 6

Report 296

Carbonate Geology and Hydrology of the Edwards Aquifer in the San Antonio Area, Texas

November 1986



Texas Water Development Board

TEXAS WATER DEVELOPMENT BOARD

REPORT 296

CARBONATE GEOLOGY AND HYDROLOGY OF THE EDWARDS AQUIFER IN THE SAN ANTONIO AREA, TEXAS

By
R. W. Maclay and T. A. Small
U.S. Geological Survey

This report was prepared by the U.S. Geological Survey under cooperative agreement with the San Antonio City Water Board and the Texas Water Development Board

November 1986

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ABSTRACT

Regional differences in the porosity and permeability of the Edwards aquifer are related to three major depositional areas, the Maverick basin, the Devils River trend, and the San Marcos platform, that existed during Early Cretaceous time. The rocks of the Maverick basin are predominantly deep basinal deposits of dense, homogeneous mudstones of low primary porosity. Permeability is principally associated with cavernous voids in the upper part of the Salmon Peak Formation in the Maverick basin. The rocks of the Devils River trend are a complex of marine and supratidal deposits in the lower part and reefal or inter-reefal deposits in the upper part. Permeable zones, which occur in the upper part of the trend, are associated with collapse breccias and rudist reefs. The rocks of the San Marcos platform predominantly are micrites that locally contain collapse breccias, honeycombed, burrowed mudstones, and rudist reef deposits that are well leached and very permeable. The rocks of the San Marcos platform form the most transmissive part of the Edwards aquifer in the San Antonio area. Karstification of the rocks on the San Marcos platform during Cretaceous time enhanced the permeability of the aquifer.

Permeability of the Edwards aquifer is greatest in particular strata (lithofacies) which have been leached in the freshwater zone. Ground water moves along vertical or steeply inclined fractures that are passageways by which water can enter permeable strata. Water moves from the fractures into beds formed by collapse breccias, burrowed wackestones, and rudist grainstones that have significant secondary porosity and permeability. Water has selectively dissolved sedimentary features within those rocks to increase the size of the openings and the degree of interconnection between pore voids.

Recognition of the hydrostratigraphic subdivisions provides a basis for defining the nonhomogeneity of the aquifer and determining its storage characteristics. The aquifer is considered to be a faulted and multilayered aquifer in which lateral circulation is mainly through very permeable, hydrostratigraphic subdivisions that are hydraulically connected at places by openings associated with steep-angle, normal faults. The Edwards aquifer is vertically displaced for its entire thickness at places along major northeastward trending faults. At these places, ground-water circulation is diverted either southwest or northeast.

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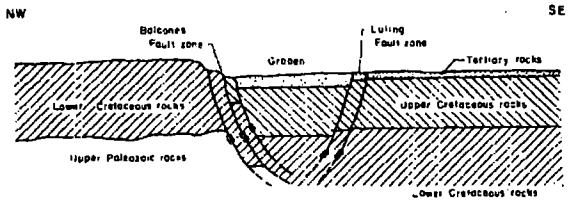

Figure 4.—Conceptual Section Showing the Regional Graben Formed by the Balcones and Luling Fault Zones in Bexar County

grabens are believed to be an expression of an antithetic fault system in which the coastward-dipping faults are the synthetic component that terminates at depth against the inland-dipping, up-to-the-coast faults (Walthal and Walper, 1967, p. 107). The depth at which the graben terminates is dependent upon the width of the graben and the inclination of the fault zones.

A geologic map of the hydrologic basin in the San Antonio area is given in Figure 5. Descriptions of the lithologic and hydrogeologic characteristics of the stratigraphic units within each of the four depositional provinces (the Central Texas platform, the Maverick basin, the Devils River trend, and the San Marcos platform) are given in Table 1. The locations of these depositional provinces are shown in Figure 6.

Previous Investigations

The U.S. Geological Survey has been collecting hydrologic and geologic data in the San Antonio area on a continuing basis since the 1930's. Reports of previous investigations include: Arnow (1959); Bennett and Sayre (1962); DeCook (1963); Garza (1962, 1966); George (1952); Holt (1959); Lang (1954); Livingston, Sayre, and White (1936); Petitt and George (1956); and Welder and Reeves (1962). These reports describe the general geology and hydrology of the area and discuss the availability of ground water. Reports prepared as a part of this study, which began in 1970, include: Maclay and Rettman (1972, 1973); Maclay, Rettman, and Small (1980); Maclay and Small (1976); Maclay, Small, and Rettman (1980, 1981); Pearson and Rettman (1976); Pearson, Rettman, and Wyerman (1975); Puente (1975, 1976, 1978); and Small and Maclay (1982). Other reports related to the geology and hydrology of limestone aquifers are listed in the section "Selected References."

METHODS OF INVESTIGATION

The initial phase in the investigation of the Edwards aquifer was to review all available reports on the geology of the Edwards Limestone or Edwards Group of Rose (1972) and equivalent rocks. Review of these reports indicated that although much new information was available, none of the recently obtained stratigraphic data had been related to the distribution of permeability and porosity in the Edwards aquifer.

The second phase was to conduct a test-drilling program to obtain cores from the Edwards aquifer for correlation with the Lower Cretaceous stratigraphic units in the Edwards Group as identified by Rose (1972) and for examination of the porosity and permeability characteristics of the rocks in these stratigraphic units. The cores were examined to determine the textures of the carbonates and their associated pore types; to determine the nature of the fractures, including the effects of dissolution; and to obtain evidence of paleokarstification. The Geological Survey cored eight test holes (Figure 1) through the entire thickness of the Edwards aquifer. The test-hole data are given in Small and Maclay (1982).

Springs faults, will not move laterally because the confined aquifer is at considerable depths below the potentiometric surface of the aquifer. Therefore, the aquifer will remain saturated even though the water levels may be lowered significantly.

The southern boundary, the "bad-water" line, is set where the concentration of 1,000 mg/L (milligrams per liter) of dissolved solids occurs in the aquifer. The concentrations of dissolved solids at given sampling points vary slightly with time, but the lateral position of the "bad-water" line has not significantly shifted. The geologic and hydrologic conditions near the southern boundary are not completely known. In general, the aquifer in the saline-water zone has considerably less capacity to transmit water than the aquifer in the freshwater zone because an integrated network of cavernous zones has not been developed by circulating freshwater. Faults have significantly disrupted the lateral continuity of the geologic formations at places in Bexar County. These factors serve to restrict lateral ground-water flow across the "bad-water" line.

The upper confining bed of the Edwards aquifer is the Del Rio Clay. The base of the Del Rio Clay was mapped by using data from geophysical logs and selected drillers' logs (Figure 11). This map represents the top of the Edwards aquifer. The Del Rio Clay conformably overlies the Georgetown Limestone on the San Marcos platform and overlies the Devils River Limestone and Salmon Peak Formation in the Maverick basin. It is predominantly a blue clay that ranges in thickness from about 30 feet in Hays County to about 120 feet in Uvalde County. Beds of nearly impermeable limestone, a few inches thick, are interspersed in the lower part of the unit. The upper part of the Del Rio Clay is slightly sandy, but the formation has negligible permeability.

The lower confining bed of the Edwards aquifer is the Glen Rose Formation, which conformably underlies the Edwards Limestone or Group. The Glen Rose Formation ranges in thickness from about 700 feet in Comal County to about 500 feet in Uvalde County. The formation consists of alternating beds of hard limestone, marls, and dolomites with some zones of evaporites. The Glen Rose Formation generally has little permeability, but yields small quantities of water from distinct lateral zones. Vertical movement is restricted by marls with negligible permeability.

Because of large displacements along faults, the Edwards aquifer is confined horizontally at places by the following stratigraphic units: the Austin Group, the Eagle Ford Group, the Buda Limestone, the Del Rio Clay, and the Glen Rose Formation. The lithology and water-bearing characteristics of these stratigraphic units are described in Table 1.

Heterogeneity of the Aquifer

The permeability of the Edwards aquifer is dependent on the position within the rocks of the aquifer. Therefore, the aquifer is heterogenous. The heterogeneity of the Edwards aquifer may be categorized into layered, discontinuous, and trending according to a classification suggested by Freeze and Cherry (1979, p. 30).

Layered Heterogeneity

Layered heterogeneity consists of individual beds or units that have different average hydraulic conductivities. However, each bed may have variable porosity. The Edwards aquifer on

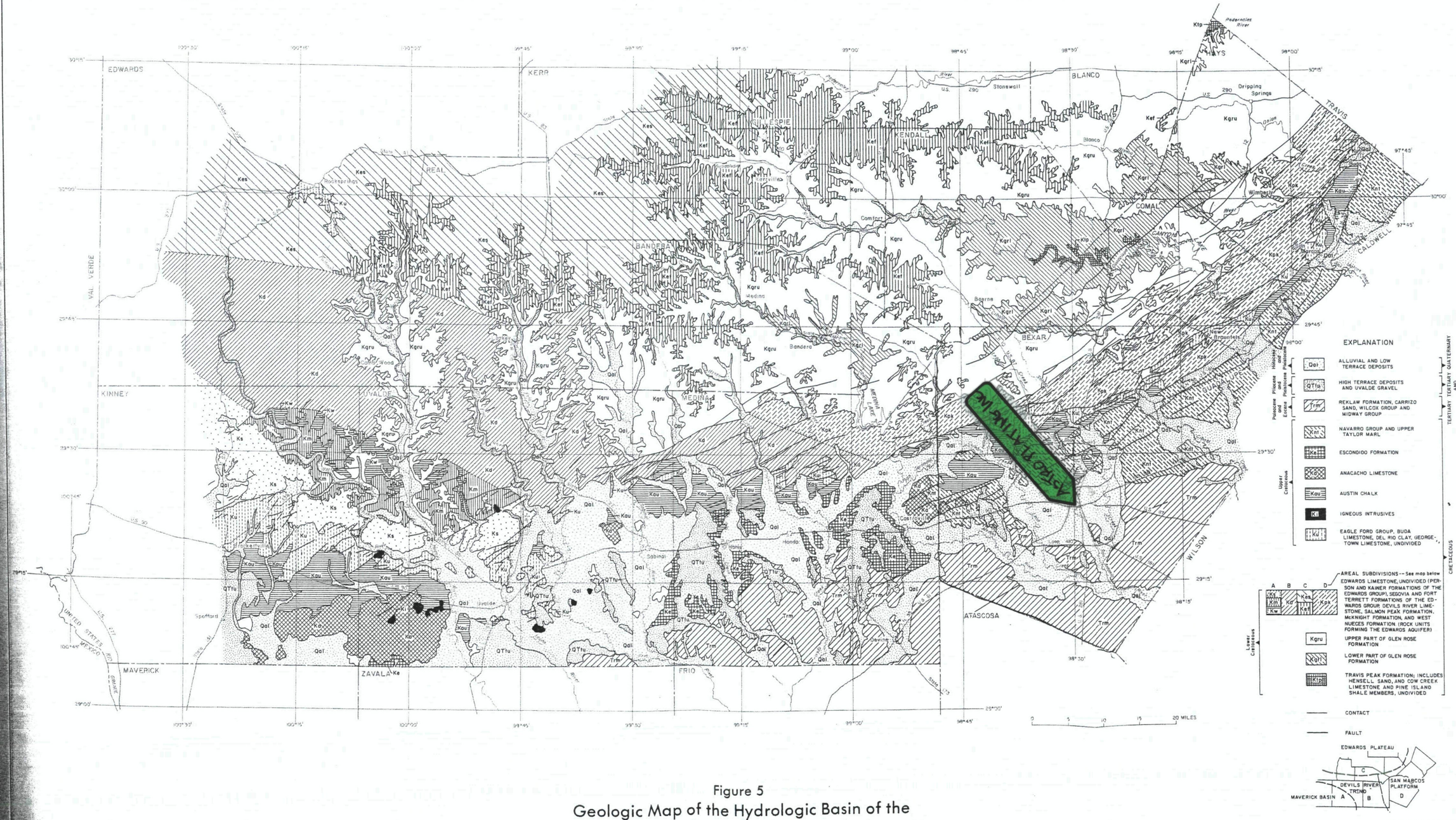

Figure 5
Geologic Map of the Hydrologic Basin of the
Edwards Aquifer in the San Antonio Area

06-011

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Table 1.--Summary of the Lithology and Water-Bearing Characteristics of the Hydrogeologic Units for Each of the Four Depositional Provinces Within the Hydrologic Basin--Continued

San Marcos platform in the Balcones fault zone

System	Provincial series	Group	Formation	Function	Member or informal unit	Function	Thickness (feet)	Lithology	Hydrostratigraphy
Quaternary			Alluvium	AQ			45	Silt, sand, gravel.	Flood plain; aquifers in hydraulic connection with streams.
			Terrace deposits	Not saturated			30	Coarse gravel, sand, and silt.	High terrace bordering streams and surficial deposits on high interstream areas in Balcones fault zone.
Tertiary	Eocene	Claiborne	Reklaw	CB			200	Sand, sandstone, and clay; lignitic, friable to highly indurated sandstone.	Deltaic and swamp deposits. Leaky confining bed confining the Carrizo aquifer below.
			Carrizo Sand	AQ			200-800	Sandstone; medium to very coarse, friable, thick bedded, few clay beds, ferruginous.	Very permeable aquifer formed by deltaic and shoreline deposits.
	Eocene and Paleocene	Wilcox and Midway		CB		CB	500-1,000	Clay, siltstone, and fine grained sandstone; lignitic, iron-bearing.	Leaky confining bed formed by deltaic and marine shoreline.
					Wills Point	CB	500	Clay and sand.	
Cretaceous	Gulfian	Navarro				CB	500	Marl, clay, and sand in upper part; chalky limestone and marl in lower part.	Deeper water marine deposits. Major barrier to vertical cross-formational flow separating Cretaceous aquifer from Tertiary aquifers.
		Taylor	Pecan Gap	CB			300-500		
			Anacacho Limestone						
		Austin	Undivided	AQ			200-350	Chalk, marl, and hard limestone. Chalk is largely a carbonate mudstone(?).	Minor aquifer that is locally interconnected with the Edwards aquifer by openings along some faults.
		Eagle Ford	Undivided	CB			50	Shale, siltstone, and limestone; flaggy limestone and shale in upper part; siltstone and very fine sandstone in lower part.	Barrier to vertical cross-formational flow.
	Comanchean	Washita	Buda Limestone and Del Rio Clay	CB			100-200	Dense, hard, nodular limestone in the upper part and clay in lower part. Thickens to the west.	Fractured limestone in the Buda is locally water yielding and supplies small quantities of water to wells. Del Rio Clay has negligible permeability.
			Georgetown Limestone (unit is within the Edwards aquifer)	CB			20-60	Dense, argillaceous limestone; contains pyrite.	Deep water limestone with negligible porosity and little permeability.
		Edwards	Person (Edwards aquifer)	AQ	Marine	AQ	90-150	Limestone and dolomite; honeycombed limestone interbedded with chalky, porous limestone and massive, recrystallized limestone.	Reefal limestone and carbonates deposit under normal open marine conditions. Zones with significant porosity and permeability are laterally extensive. Karstified unit.
					Leached and collapsed members	AQ	60-90	Limestone and dolomite. Recrystallized limestone occurs predominantly in the freshwater zone of the Edwards aquifer. Dolomite occurs in the saline zone.	Tidal and supratidal deposits, conforming porous beds of collapse breccias and burrowed biomicrites. Zones of honeycombed porosity are laterally extensive.
					Regional dense bed	CB	20-30	Dense, argillaceous limestone.	Deep water limestone. Negligible permeability and porosity. Laterally extensive bed that is a barrier vertical flow in the Edwards aquifer.
			Kainer (Edwards aquifer)	AQ	Grainstone	AQ	50-60	Limestone, hard, miliolid grainstone with associated beds of marly mudstones and wackestones.	Shallow water, lagoonal sediments deposited in a moderately high energy environment. A cavernous, honeycombed layer commonly occurs near the middle of the subdivision. Interparticle porosity is locally significant.
					Dolomitic (includes Kirschberg evaporite)	AQ	150-200	Limestone, calcified dolomite, and dolomite. Leached, evaporitic rocks with breccias toward top. Dolomite occurs principally in the saline zone of the aquifer.	Supratidal deposits toward top. Mostly tidal to subtidal deposits below. Very porous and permeable zones formed by boxwork porosity in breccias or by burrowed zones.
					Basal Nodular Bed	CB	40-70	Limestone, hard, dense, clayey; nodular, mottled, stylolitic.	Subtidal deposits. Negligible porosity and permeability.

Table 1.--Summary of the Lithology and Water-Bearing Characteristics of the Hydrogeologic Units for Each of the Four Depositional Provinces Within the Hydrologic Basin--Continued

San Marcos platform in the Balcones fault zone--Continued

System	Provincial series	Group	Formation	Function	Member or informal unit	Function	Thickness (feet)	Lithology	Hydrostratigraphy
Cretaceous	Comanchean	Trinity	Glen Rose	CB	Upper part of Glen Rose	CB	300-400	Limestone, dolomite, shale and marl. Alternating beds of carbonates and marls. Evaporites and dolomites toward top variable bedding.	Supratidal and shoreline deposits toward top. Tidal to subtidal deposits below. Unit has little vertical permeability but has moderate lateral permeability.
					Lower part of Glen Rose	AQ	200-250	Massive limestone with few thin beds of marl.	Marine deposits - caprinid reef zones and porous and permeable honeycomb porosity near the base.
			Pearsall (Travis Peak in outcrop)	CB	Bexar	CB	300	Limestone and shale.	Shoreline deposits, relatively impermeable unit in the Balcones fault zone.
					Cow Creek Limestone member	AQ		Limestone and dolomite. Grainstone, packstone, and coquinoid beds.	Moderately permeable unit in Comal County.
					Pine Island Shale member	CB		Shale and argillaceous limestone.	Little permeability.
	Coahuilan	Nuevo Leon and Durango of Mexico	Sligo and Hosston Formations	CB			800-1,500	Limestone, shale, and sandstone.	Sandstone in lower part is moderately permeable.
Pre-Cretaceous								Slate, phylite, locally sedimentary rocks in grabens.	Basement rocks. No circulating ground water.

The volume of water in storage in the confined freshwater zone of the aquifer, which has an area of 1,500 mi^2, is estimated to be 19.5 million acre-feet. This estimated volume is based on an estimated average specific yield of 4 percent and an aquifer thickness of 500 feet. This is a very large volume of water; but, only a small fraction of this volume can be recovered economically because of adverse conditions, such as major water-level declines, greater cost of pumping, and local invasion of saline water. Some of these adverse conditions could occur gradually and could be difficult to detect within a short period of time.

Hydrologic Balance

The hydrologic balance is represented by an equation which states that inflow equals outflow, plus or minus change in storage for a designated period. In the Edwards aquifer, inflow is equivalent to recharge; outflow is the summation of pumpage and spring flow; and the change in storage is indicated by changes in water levels of wells. Water levels in index well AY-68-37-203, which is located at Fort Sam Houston in San Antonio, are used to indicate the relative volume of water in storage. Monthly or yearly average water levels in this well correlate closely with other monthly or yearly average water levels in wells distributed throughout the Edwards aquifer (Puente, 1976). The relation of water levels in downtown San Antonio to changes in the annual water balance for the Edwards aquifer is shown in Figure 22.

Annual pumpage has more than tripled since 1934, but water levels have also risen to record highs. The explanation of this apparent anomaly is that during this period, recharge has been substantially greater than normal. The intermittent, rapid lowering of water levels during the summer in index well AY-68-37-203 during the 1960's and 1970's is the result of greater daily pumping rates by wells in the Bexar County area. Transient pressure waves resulting from changes in pumping rates are transmitted and attenuated quickly through the zone of the confined aquifer.

Application of the hydrologic budget equation to the Edwards aquifer provides only a general approximation of the hydrologic regime. It does not account for areal variations in recharge, aquifer characteristics, and discharge. The average annual hydrologic budget does not indicate short-term transient effects which may be quite significant in individual wells.

The recharge component of the hydrologic balance has been estimated for 1934-78 and is tabulated in Table 7. The method of calculating annual recharge is based on data collected from a network of streamflow-gaging stations and on assumptions related to applying the runoff characteristics from gaged areas to ungaged areas. The basic approach is the continuity equation in which recharge within a stream basin is the difference between measured streamflow upstream and downstream from the infiltration area of the aquifer plus the estimated inflow from the interstream areas within the infiltration area. Details of the procedures for calculating recharge are given by Puente (1978).

The calculated discharge by county during 1934-76 is given in Table 8. Pumpage data are obtained from large users, which include municipalities, water districts, and industries. Springflow is measured regularly at Comal Springs and San Marcos Springs. Other springs are measured periodically.

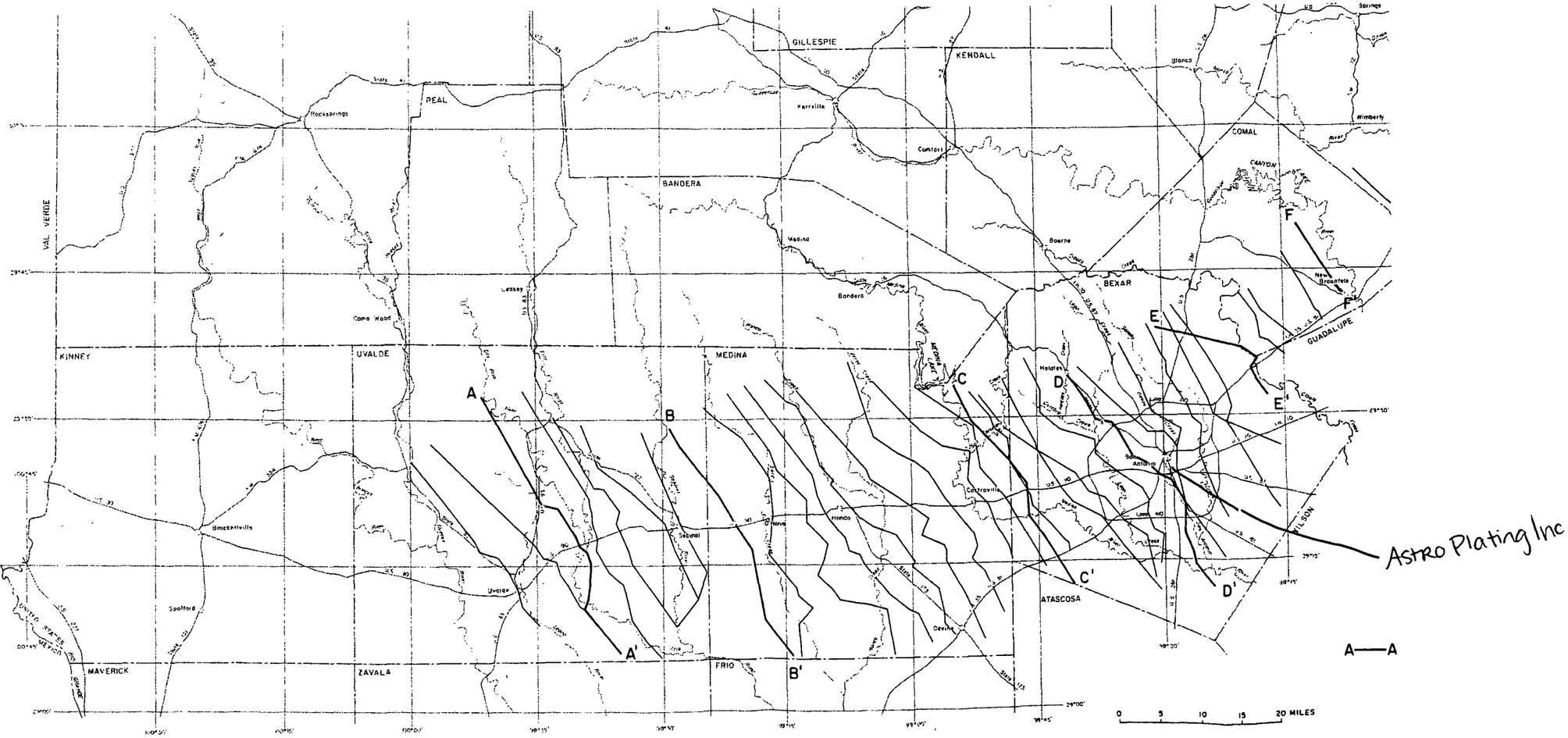

Figure 15
Location of Hydrogeologic Sections

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Above 6/9/2010

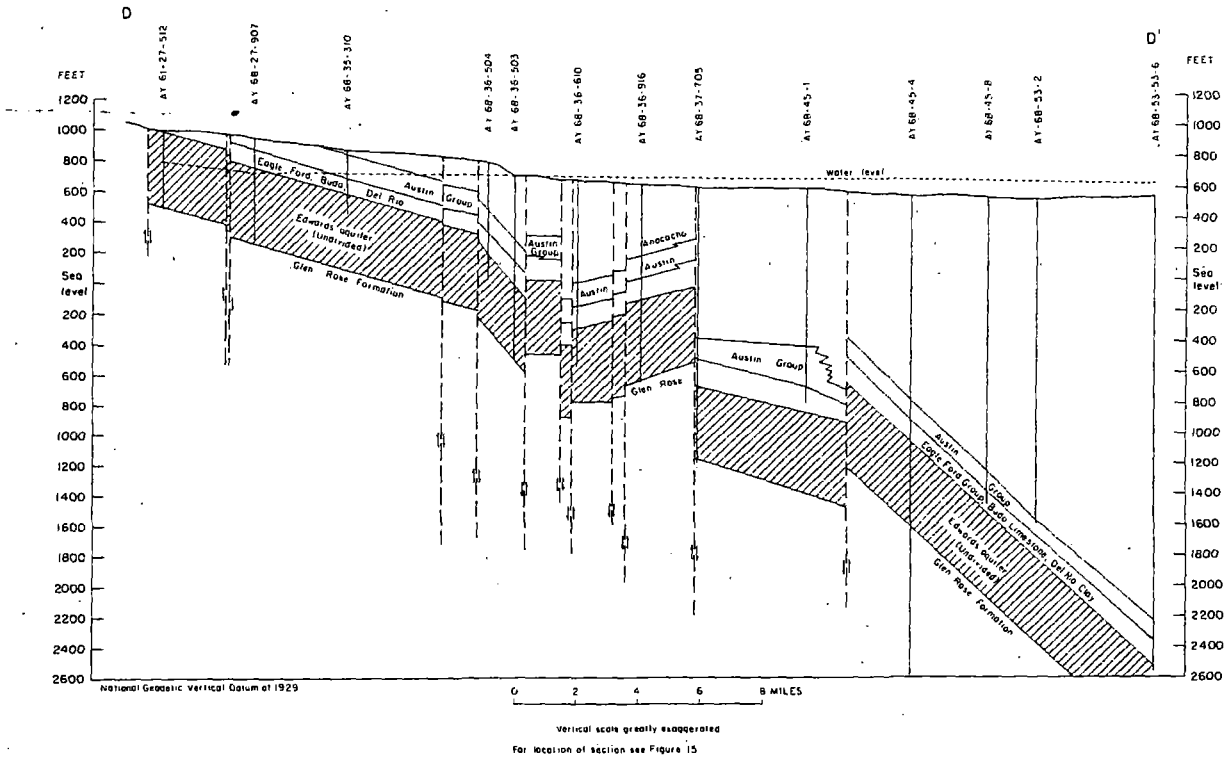
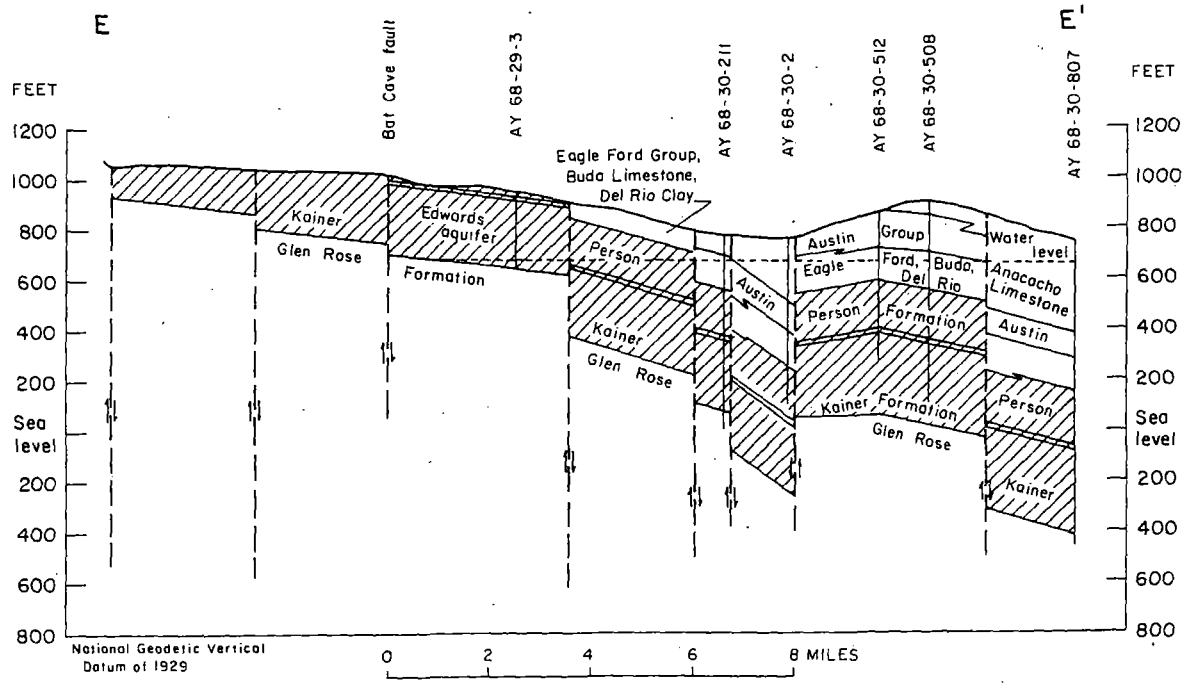


Figure 16d.—Hydrogeologic Section D-D' Through the Edwards Aquifer



For location of section see Figure 15

Figure 16e.—Hydrogeologic Section E-E' Through the Edwards Aquifer

REFERENCE 7

TEXAS BOARD OF WATER ENGINEERS

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BULLETIN 5911

GROUND-WATER GEOLOGY OF BEXAR COUNTY, TEXAS

Prepared in cooperation with the United States Geological Survey
and the City of San Antonio

October 1959

Price $1.00
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Tertiary(?) System

Pliocene(?) Series

Uvalde gravel.--The Uvalde gravel is the oldest and highest terrace deposit in Bexar County. Although originally it may have covered extensive areas in and south of the Balcones fault zone, it now only caps some of the hills. The deposits generally are less than 30 feet thick; they were not mapped during this investigation.

The Uvalde gravel consists of limestone and flint boulders embedded in a matrix of clay or silt, the whole in many places being cemented with caliche. The proportion of flint to limestone boulders increases toward the south away from the Edwards Plateau, which undoubtedly was the source of the gravel.

Because of its topographic position on hilltops, the Uvalde gravel probably contains little or no water.

Quaternary System

Pleistocene and Recent Series

Alluvium.--A series of terraces, topographically lower than that formed by the Uvalde gravel, is underlain by alluvium of Pleistocene and Recent age. The Recent deposits form the flood plains of the present streams; the Leona formation of Pleistocene age is intermediate in both age and position between the Recent flood-plain deposits and the hillcaps formed by the Uvalde gravel. The Leona formation was named by Hill and Vaughan (1898, p. 254) for a specific set of terrace deposits of Pleistocene age in Uvalde County; the name since has been extended to apply to all the terrace deposits lying between the Recent flood-plain deposits and the Uvalde gravel along all the streams of the area (Sayre, 1936, p. 67).

The thickest and most extensive deposits of alluvium are in the valleys of Salado and Leon Creeks and the San Antonio and Medina Rivers, in the plain east of Salado Creek, and between the Culebra Road and Mitchell Lake on the plain between Leon Creek and the San Antonio River. The alluvium ranges in thickness from 0 to about 45 feet. This investigation did not include mapping of the alluvium.

The alluvium consists largely of gravel, sand, and silt. Gravel deposits along the south side of the Medina River from the Medina County line to Macdona and along Cibolo Creek yield water of good quality to wells for domestic and livestock use.

GEOLOGIC STRUCTURE

The sedimentary rocks in Bexar County strike east-northeastward and dip south-southeastward toward the Gulf of Mexico. In the northern part of the county, north of Helotes and Camp Bullis, the average dip of the rocks is between 10 and 15 feet per mile (George, 1952, p. 33), conforming very closely to the average slope of the land surface. Thus, one formation originally constituted

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REFERENCE 8

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Pioneer Concrete (Name) Address 6800 Park Ten Blvd. #226 San Antonio, Texas 78213 (Street or RFD) (City) (State) (Zip)

2) LOCATION OF WELL: County Bexar Downtown miles in ____ (N.E., S.W., etc.) direction from San Antonio (Town)
Steves Avenue off Probandt

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ Legal description:
Section No. ____ Block No. ____ Township ____
Abstract No. ____ Survey Name ____
Distance and direction from two intersecting section or survey lines ____
☐ See attached map.

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Domestic ☒ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other ____

5) DRILLING METHOD (Check): ☐ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☒ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other ____

6) WELL LOG: 9-5-84 – 9-20-84 Date drilled ____

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 3/4"	Surface	987
6"	987	1033

7) BOREHOLE COMPLETION: ☐ Open Hole ☒ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other ____
If Gravel Packed give interval ... from ____ ft. to ____ ft.

From (ft.)	To (ft.)	Description and color of formation material
0	12	Fill dirt & Loose Rock
12	30	Brown Navarro Shale
30	662	Light & Dark Gray Taylor Lime
662	876	Austin Chalk
876	900	Lignite
900	937	Buda
937	979	Del Rio Shale
979	987	George Town
987	1033	Edwards

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
7"	N	Steel	0	987'	24#
10 3/4	New	Steel (Surface Casing)	0	16'	

CEMENTING DATA
Cemented from 987' ft. to 0 ft.
Method used Pressure Cemented
Cemented by Haliburton (Company or Individual)

9) WATER LEVEL:
Static level FLOWING WELL ft. below land surface Date ____
Artesian flow ____ gpm. Date ____
Flowing Well

10) PACKERS: Type ____ Depth ____
None

RECEIVED SEP 20 1985
RECEIVED OCT 20 1985 TEXAS WATER COMMISSION
TEXAS WATER COMMISSION

11) TYPE PUMP:
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder ☐ Other ____
Depth to pump bowls, cylinder, jet, etc., 63' ft.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☒ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☐ No

12) WELL TESTS: None
☐ Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

(Use reverse side if necessary)

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

COMPANY NAME Haskin Pump Service (Type or Print) Water Well Driller's License No. 936

ADDRESS 15403 Capital Port (Street or RFD) San Antonio, Texas (City) 78249 (State) (Zip)

(Signed) Rudolf Buchanan (Licensed Water Well Driller) (Signed) ____ (Registered Driller Trainee)

For TDWR use only
Well No. 68-32-7E
Located on map Yes DLE

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 5-27-82) DEPARTMENT OF WATER RESOURCES COPY

08-001

Send original copy by certified mail to: TNRCC, P.O. Box [redacted]087, Austin, TX 78711-3087

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas
WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) **OWNER** L & H Packing Company (Name) **ADDRESS** P. O. Box 14514, San Antonio (Street or RFD) (City) Texas (State) 78214 (Zip)

2) **ADDRESS OF WELL:**
County Bexar 647 Steves (Street, RFD or other) San Antonio (City) Texas (State) (Zip) **GRID #** 68-37-7

3) **TYPE OF WORK (Check):**
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE (Check):** ☐ Monitor ☐ Environmental Soil Boring ☐ Domestic ☒ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) X N

6) **WELL LOG:**
Date Drilling:
Started 12-16-19 96
Completed 1-3- 19 97

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
15 1/2	Surface	1050
9 7/8	1050	1475

7) **DRILLING METHOD (Check):** ☐ Driven ☐ Air Rotary ☒ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft.)	To (ft.)	Description and color of formation material
0 -	8	Surface
8 -	15	Caliche
15 -	22	Sand & Gravel
22 -	500	Navarro
500 -	621	Taylor
621 -	797	Austin Chalk
797 -	825	Eagleford
825 -	890	Buda Limestone
890 -	948	Del Rio Clay
948 -	1475	Edwards

(Use reverse side if necessary)

8) **Borehole Completion (Check):** ☒ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other
If Gravel Packed give interval ... from _____ ft. to _____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
10 3/4	New	Steel	0	1020	

9) **CEMENTING DATA** [Rule 338.44(1)]
Cemented from 0 ft. to 1020 ft. No. of sacks used 450
_____ ft. to _____ ft. No. of sacks used _____
Method used _____
Cemented by _____
Distance to septic system field lines or other concentrated contamination N/A ft.
Method of verification of above distance Engineers design

10) **SURFACE COMPLETION**
☒ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) **WATER LEVEL:**
Static level _____ ft. below land surface Date _____
Artesian flow 1200 - 1400 gpm. Date 1-3-97

12) **PACKERS:** Type Depth
N/A

13) **TYPE PUMP:** N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) **WELL TESTS:**
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☒ Estimated
Yield: 1500 gpm with 0 ft. drawdown after N/A hrs.

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Good Depth of strata 948 - 1475
Was a chemical analysis made? ☐ Yes ☒ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Cude Drilling, Inc. (Type or print) **WELL DRILLER'S LICENSE NO.** 3284W

ADDRESS P. O. Box 8 (Street or RFD) Pleasanton (City) Texas (State) 78064 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

X 08-cc

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

TNRCC COPY

REFERENCE 9

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

TELEPHONE MEMO TO THE FILE

Please complete with typewriter or black pen.

Call to: David Jerry TCEQ SWAP

Call from: S. Loftus

Date of call: 3/13/2003

File no.: S.A. Gas & Elec.

Phone no.: ( )

Subject: Wellhead protection area

Information for file: I called to discuss source water protection areas near site. The site is not located w/in one. There are twelve within 4 mile radius. San Antonio uses a quarter mile radius from wellhead as wellhead protection area.

Signed

09-001

REFERENCE 10

FEMA

Info

Scale: 7 %

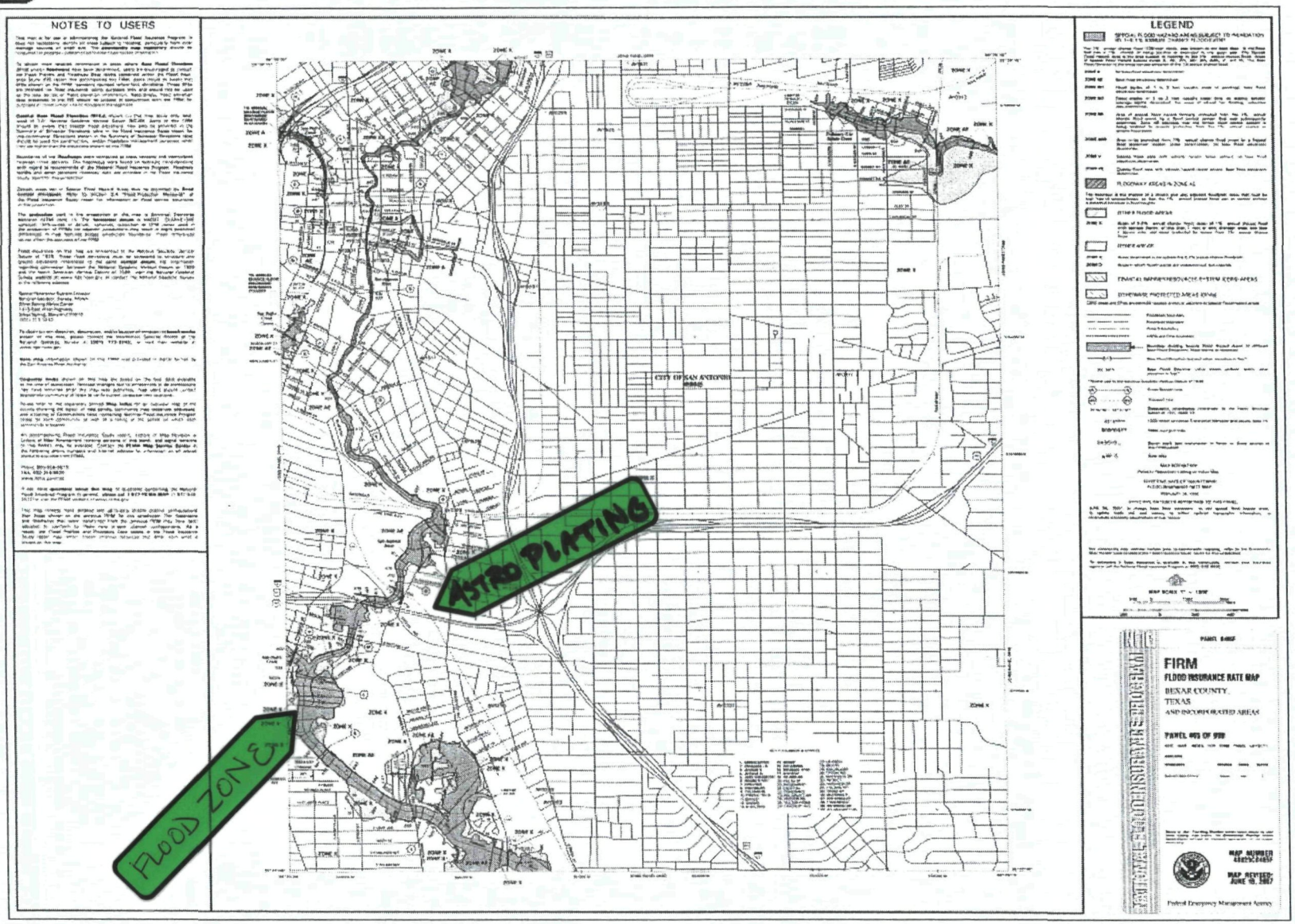
Help

Zoom Win | Pan

Zoom In | Zoom Out

1:1 Zoom In | MAX Zoom Out

Make a FIRMette



10-004

T. Lowe 4/16/10

REFERENCE 11

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

TELEPHONE MEMO TO THE FILE

Please complete with typewriter or black pen.

Call to: Steve Lusk - San Antonio River Authority Call from: Susy Loftus

Date of call: 5-6-03 File no.: S.A. Gos & Elec.

Phone no.: (210) 227-1373 Subject: Sampling River

Information for file: He said that no permission is needed to sample river that he is aware of, altho' River is owned by San Antonio within a certain distance. He said all of the creeks & river are sampled regularly.

He was not aware of wetlands - gave me number of the parks people for the missions park (national park): 210/534-8875. Said they would probably have quite a lot of info.

The SARA field biologist supervisor, Ernest Moran, has been sampling here for ~18 years - he should be an excellent resource. (Call him th - F

To reach their office: I35 to S. Alamo exit - at bottom of ramp turn left (under overpass). Go to 3rd light - Main St. - turn left; go one block, turn right Office building on left — 100 E. Guenther. 2-story

Signed S Loftus

11 001

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

TELEPHONE MEMO TO THE FILE

e complete with typewriter or black pen. Missions National Park

Call to: James Oliver

Date of call: 5-8-03 1:50

Phone no.: (210) 534-8875

Call from: Susy Gates

File no.: S.A. Gas & Elec.

Subject: River — wetlands?

Information for file: L/M re: wetlands, habitats, sampling

5/12/03 He called me back. No wetlands that he is aware of. There is a fishery close to intersection of Military Drive & S.A. River — ESPADA DAM.

Signed _____

NRCC-0225 (Rev. 09-01-93)

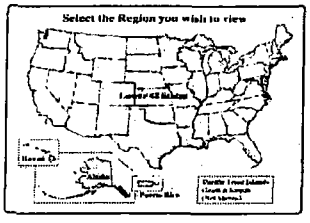
REFERENCE 12

National Wetlands Inventory

Branch of Resource and Mapping Support

Geospatial Wetlands Data

- Fact Sheets
- Wetlands Mapper
- Download Digital Data
- Web Map Services (WMS)
- View Wetlands w/Google Earth
- Product Summary and Metadata
- Wetland Codes
- Hard-copy maps



Learn More ...

NSDI Wetlands Layer

Status and Trends

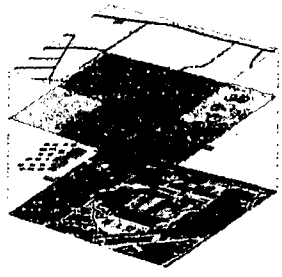
Other Wetland Topics

Contacts & Other Info.

Download Seamless Wetlands Data

There are two methods for downloading seamless wetlands data as viewed on the Wetlands Mapper. The Wetlands Data Extraction Tool uses the USGS topographic quadrangle names for area selection and extraction. You can also download data by State. Each State data download is available as either a compressed file Geodatabase or a Shapefile. You can view the Shapefiles by using ESRI's ArcExplorer free software, among others. Geodatabases require a full ESRI ArcDesktop license.

Wetlands Data Extraction Tool



The Wetlands Data Extraction Tool uses the USGS topographic quadrangle names for area selection and extraction. If you are unfamiliar with the name of the quadrangle you wish to download you can use the Wetlands Mapper to zoom to your area of interest and view the quadrangle names.

Click here to open the Data Extraction Tool

Not all of the United States or U.S. territories have been digitally mapped by the U.S. Fish and Wildlife Service. Please use the Wetlands Mapper and the Wetlands Data Availability layer to verify that the area you are selecting has digital data available.

How large of an area can I download?

Depending on the region you are extracting data from (lower 48 states, Alaska, Hawaii, Puerto Rico and the USVI, Pacific Trust Territories) different features are used for data extraction. Below is a list of available areas for selection.

- Lower 48 states — USGS 1:24,000 or 1:100,000 topographic quadrangle
- Alaska — USGS 1:63,000 topographic quadrangle
- Hawaii — County and USGS topographic quadrangle
- Puerto Rico and USVI — County and USGS topographic quadrangle
- Pacific Trust Territories — County/Island

Coordinate System

All data downloaded using the Wetlands Data Extraction Tool will be in the Geographic Coordinate System (GCS) with a North American Datum (NAD) of 1983.

What will I Get?

With each download you will receive a .zip file that contains one or all of the following Shapefiles:

- Wetland_Polygons — NWI wetland polygon data.
- Metadata — NWI project metadata including image dates used for delineation.
- Historic_Map_Info — NWI historic map report information.

Note: Acreage information for wetland polygons along the edge of the download area will be incorrect for the polygon, but correct for the wetland. Acreage was calculated on the raw data, in an Albers Equal Area Projection, before the data was clipped. If accurate acreage within the area of interest in needed, we recommend reprojecting the data into an

12-001

acreage within the area of interest if needed, we recommend reprojecting the data into an equal area projection and recalculating the acreage field.

Extraction time

Due to the amount of data being requested (especially when using a 1:100,000 quad for data selection), the resulting processing time to prepare the download file may take up to 13 minutes. Please be patient while our server works to prepare your file. In the event the server cannot process your file, you should receive a message in your browser window indicating the server was unable to fulfill your request at this time.

Download Seamless Wetlands Data by State

By selecting a State file below, you can download current seamless wetlands data as viewed on the Wetlands Mapper.

Before you begin

Each State data download is available as either a compressed file Geodatabase or a Shapefile. Both files are compressed by using the .zip format.

Not all of the United States and U.S. Territories have been digitally mapped by the U.S. Fish and Wildlife Service. Please refer to the Wetlands Mapper Wetlands Data Availability layer to view where wetlands have been mapped. Each download also includes a 'Public_Metadata' data layer that identifies where and when wetlands were mapped within the state.

NOTE: Due to the variation in use and analysis of this data by the end user, each of states wetlands data extends beyond the state boundary. Each state includes wetlands data that intersect the 1:24,000 quadrangles that contain part of that state (1:2,000,000 source data). This allows the user to clip the data to their specific analysis datasets. Beware that two adjacent states will contain some of the same data along their borders.

Coordinate System

All data downloaded is in the Albers projection with a North American Datum (NAD) of 1983.

Download time

Due to the amount of data being downloaded, the resulting processing time to prepare the download file may take up to 60 minutes or more, and can range in sizes from 1 to 463MB.

State Downloads (file downloads last updated January 22, 2010)

State	Download Type	
Alabama	Geodatabase	Shapefile
Alaska	Geodatabase	Shapefile
Arizona	Geodatabase	Shapefile
Arkansas	Geodatabase	Shapefile
California	Geodatabase	Shapefile
Colorado	Geodatabase	Shapefile
Connecticut	Geodatabase	Shapefile
Delaware	Geodatabase	Shapefile
Florida	Geodatabase	Shapefile
Georgia	Geodatabase	Shapefile

State	Download Type	
Nebraska	Geodatabase	Shapefile
Nevada	Geodatabase	Shapefile
New Hampshire	Geodatabase	Shapefile
New Jersey	Geodatabase	Shapefile
New Mexico	Geodatabase	Shapefile
New York	Geodatabase	Shapefile
North Carolina	Geodatabase	Shapefile
North Dakota	Geodatabase	Shapefile
Ohio	Geodatabase	Shapefile
Oklahoma	Geodatabase	Shapefile

12-002

Georgia	Geodatabase	Shapefile
Hawaii	Geodatabase	Shapefile
Idaho	Geodatabase	Shapefile
Illinois	Geodatabase	Shapefile
Indiana	Geodatabase	Shapefile
Iowa	Geodatabase	Shapefile
Kansas	Geodatabase	Shapefile
Kentucky	Geodatabase	Shapefile
Louisiana	Geodatabase	Shapefile
Maine	Geodatabase	Shapefile
Maryland	Geodatabase	Shapefile
Massachusetts	Geodatabase	Shapefile
Michigan	Geodatabase	Shapefile
Minnesota	Geodatabase	Shapefile
Mississippi	Geodatabase	Shapefile
Missouri	Geodatabase	Shapefile
Montana	Geodatabase	Shapefile

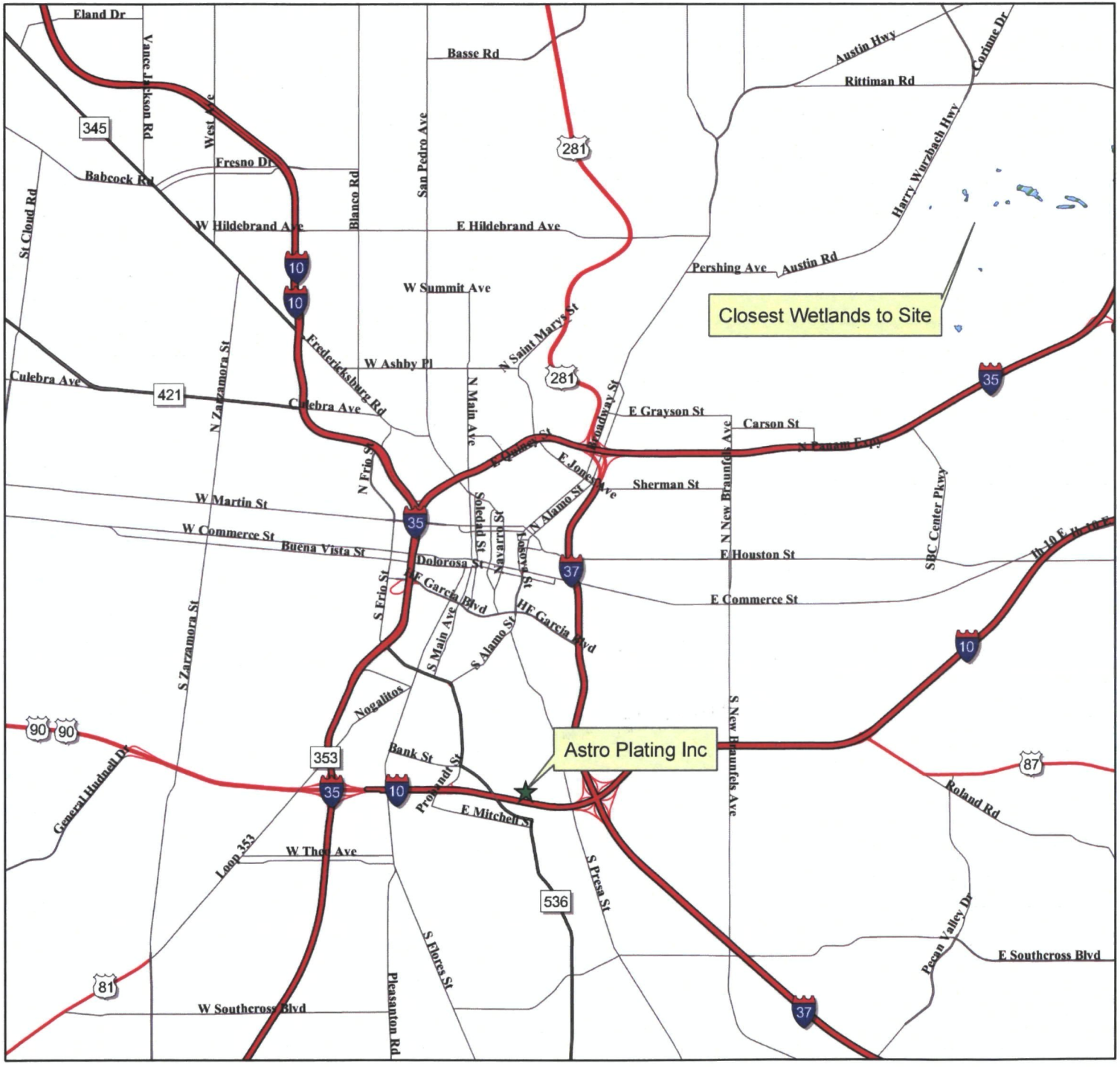
Oklahoma	Geodatabase	Shapefile
Oregon	Geodatabase	Shapefile
Pacific Trust Islands	Geodatabase	Shapefile
Pennsylvania	Geodatabase	Shapefile
Puerto Rico & Virgin Islands	Geodatabase	Shapefile
Rhode Island	Geodatabase	Shapefile
South Carolina	Geodatabase	Shapefile
South Dakota	Geodatabase	Shapefile
Tennessee	Geodatabase	Shapefile
Texas	Geodatabase	Shapefile
Utah	Geodatabase	Shapefile
Vermont	Geodatabase	Shapefile
Virginia	Geodatabase	Shapefile
Washington	Geodatabase	Shapefile
West Virginia	Geodatabase	Shapefile
Wisconsin	Geodatabase	Shapefile
Wyoming	Geodatabase	Shapefile

Custom Wetland Data Extractions

Last updated: March 2, 2010

Home | FAQs | Contact Us

12 003



0 0.4 0.8 1.6 2.4 3.2 Miles

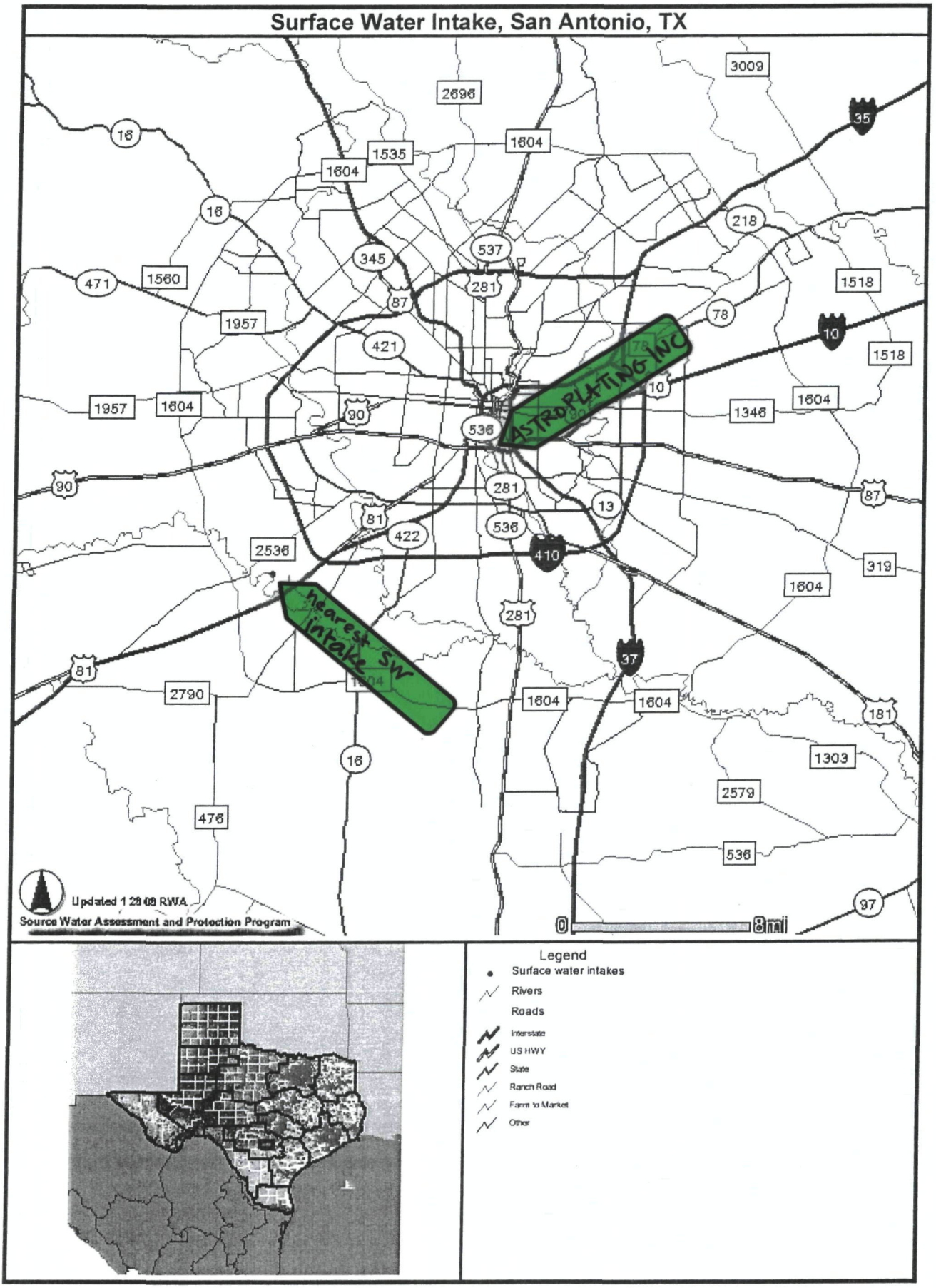
TCEQ

Wetlands Location

The base data used for this map is the aerial imagery of Bexar County. Projection: NAD 1983, UTM Zone 14 N. This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

12 04

REFERENCE 13



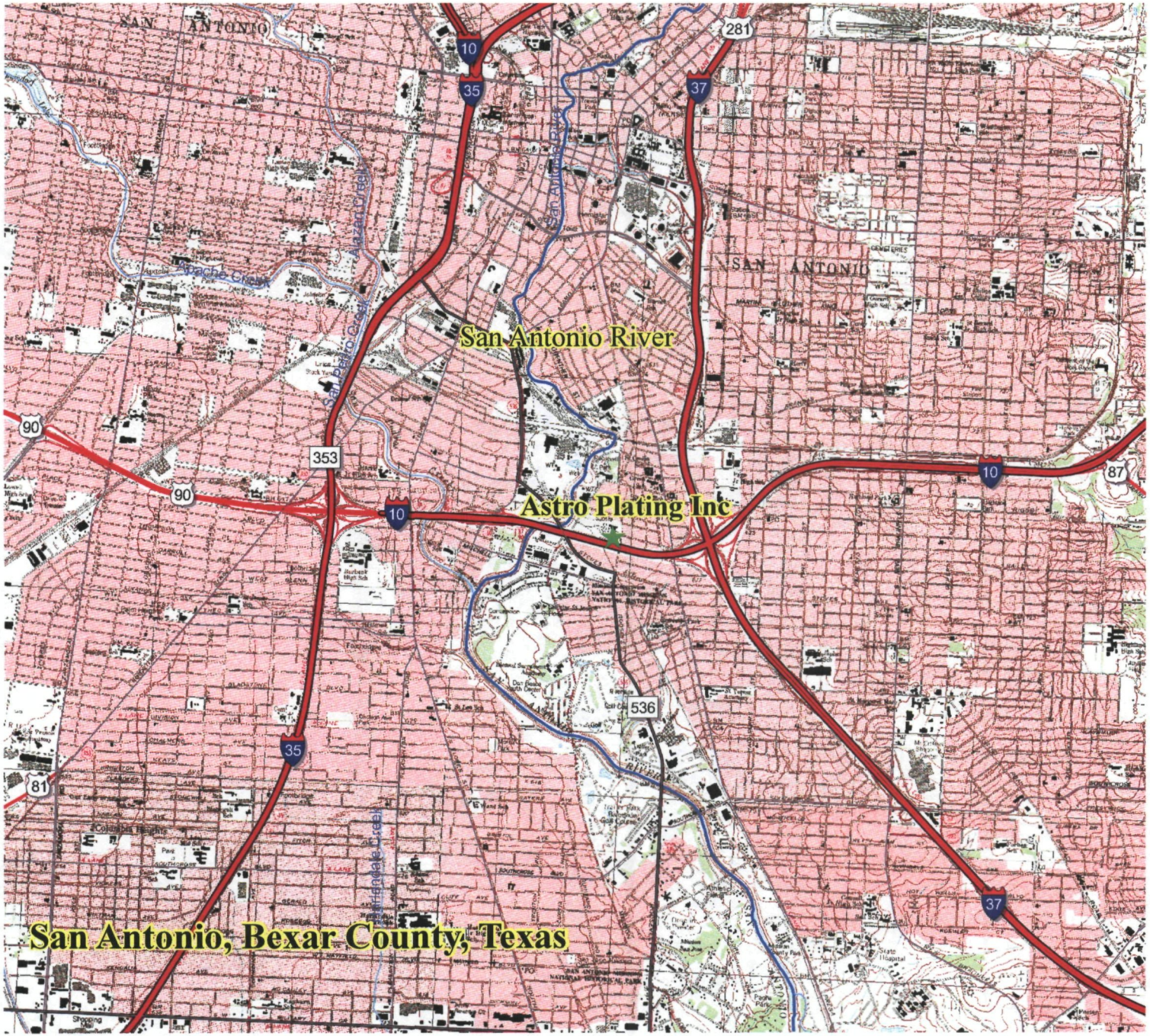
Above 4/16/10

13 001

APPENDICES

APPENDIX A

Site Location Map



0 0.25 0.5 1 1.5 2 Miles

TCEQ

Astro Plating Inc

TXD044773265

915 Roosevelt
San Antonio, Bexar
County, TX 78210

Site Location

The base data used for this map is the aerial imagery of Bexar County. Projection: NAD 1983, UTM Zone 14 N. This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

APPENDIX B

Site Features Map

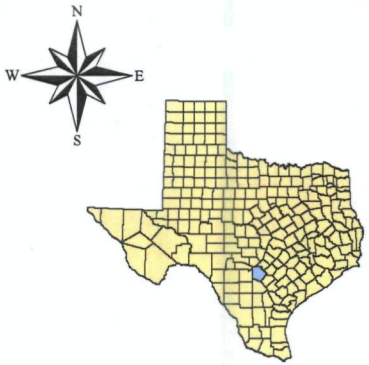
TCEQ

Astro Plating Inc

TXD044773265

915 Roosevelt
San Antonio, Bexar
County, TX 78210

Site Features

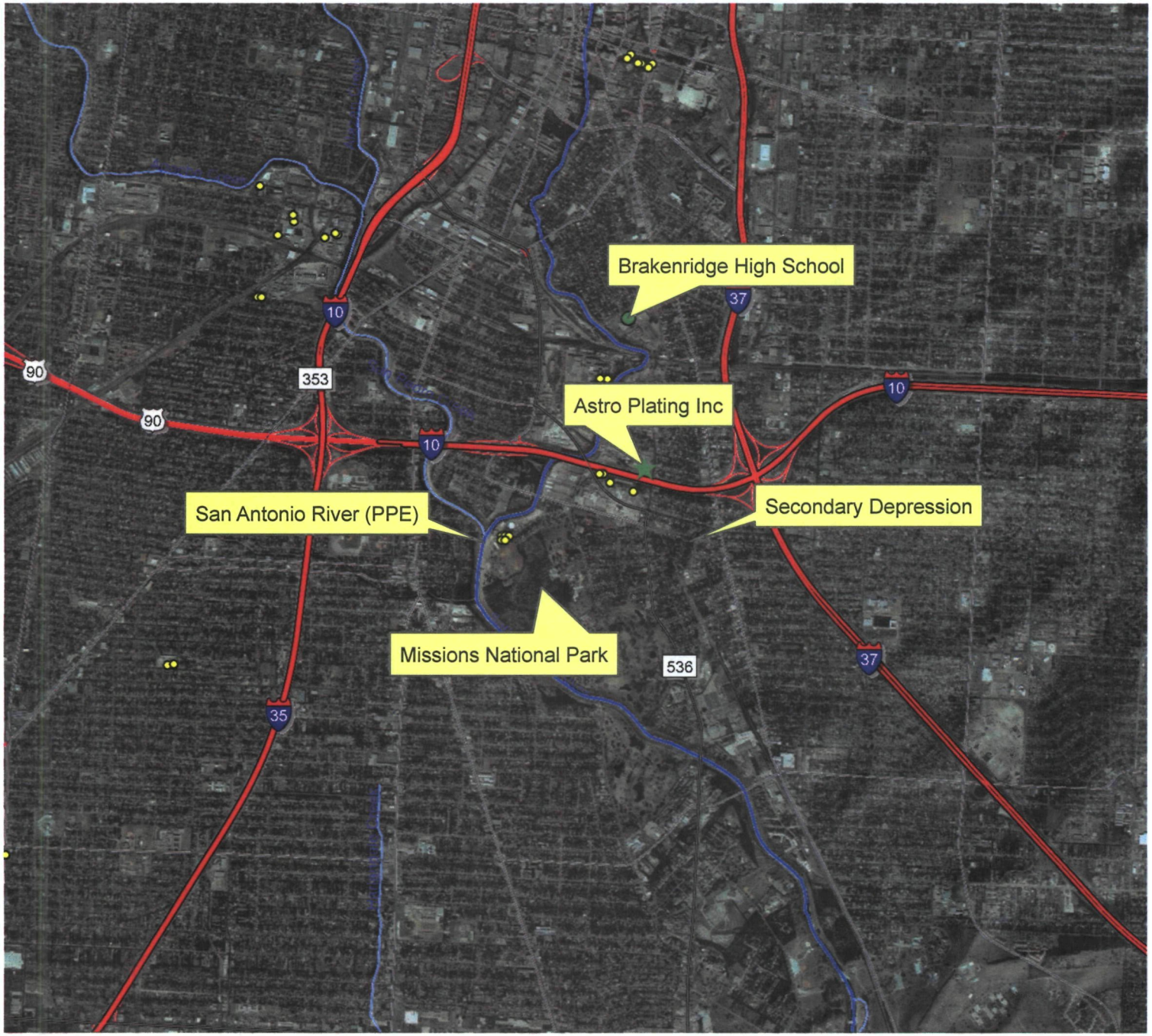


Note: Monitoring well locations are approximate.

The base data used for this map is the 2008 National Agriculture Imagery Program (NAIP) aerial imagery of Bexar County. Projection: NAD 1983, UTM Zone 14 N. This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This mapdoes not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

APPENDIX C

Site Receptors Map



TCEQ

Astro Plating Inc

TXD044773265

915 Roosevelt
San Antonio, Bexar
County, TX 78210

Site Receptors

Legend

- PWS wells

0 0.3 0.6 1.2 1.8 2.4 Miles

The base data used for this map is the aerial imagery of Bexar County. Projection: NAD 1983, UTM Zone 14 N. This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

APPENDIX D

Photographic Documentation

Photograph: 1	Date: 2/24/2010
Photographer: Susy Loftus	Direction: West
Description: Inside the main building of Astro Plating, looking in the direction of the Storage/Racking area and Electroplating area with acid rinse tanks.	

Photograph: 2	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Side of caustic dip tank.	Notice precipitate on rim.

Photograph: 3	Date: 2/24/2010
Photographer: Susy Loftus	Direction: East
Description: Acid waste rinse tank.	

Photograph: 4	Date: 2/24/2010
Photographer: Susy Loftus	Direction: Northeast
Description:	

Photograph: 5	Date: 2/24/2010
Photographer: Susy Loftus	Direction: Northeast
Description: Zinc bath, Zinc rinse tank, and boiling Nickel bath in back.	

Photograph: 6	Date: 2/24/2010
Photographer: Susy Loftus	Direction: Northwest
Description: Chromium baths and Nickel rinse tank	

Photograph: 7	Date: 2/24/2010
Photographer: Susy Loftus	Direction: Northwest
Description: Boiling Nickel bath	

Photograph: 8	Date: 2/24/2010
Photographer: Susy Loftus	Direction: West
Description: Grating underneath acid/rinse tanks.	

Photograph: 9	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Drum of gold rinse.	

Photograph: 10	Date: 2/24/2010
Photographer: Susy Loftus	Direction: West
Description: Sides of some of the metal rinse tanks.	

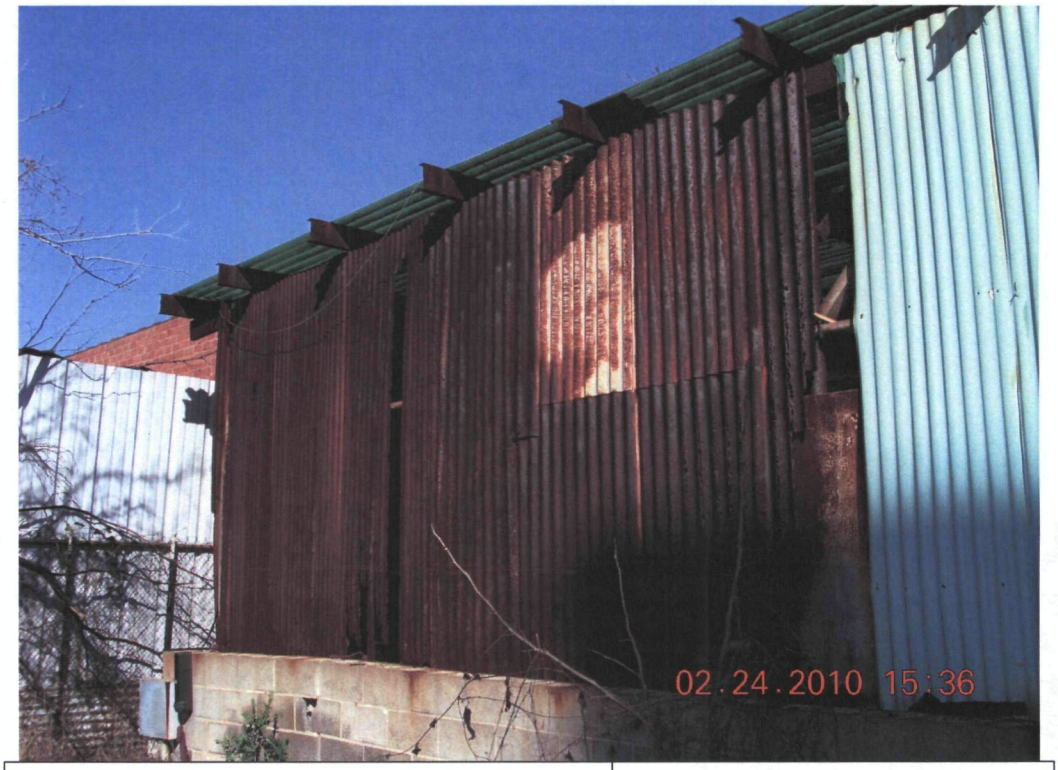
Photograph: 11	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Muriatic acid tank in Metal/Paint Stripping area. Note staining on concrete bricks.	

Photograph: 12	Date: 2/24/2010
Photographer: Susy Loftus	Direction: Northeast
Description: Caustic soda rinse drum in Metal/Paint Stripping area. Note staining on floor.	

Photograph: 13	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Drums of Sulfuric acid and Hydrochloric acid.	

Photograph: 14	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Rusted drums of Muriatic acid and waste water.	

Photograph: 15	Date: 2/24/2010
Photographer: Susy Loftus	Direction: South
Description: Drums of Nitric acid. Notice staining on outside of drum.	

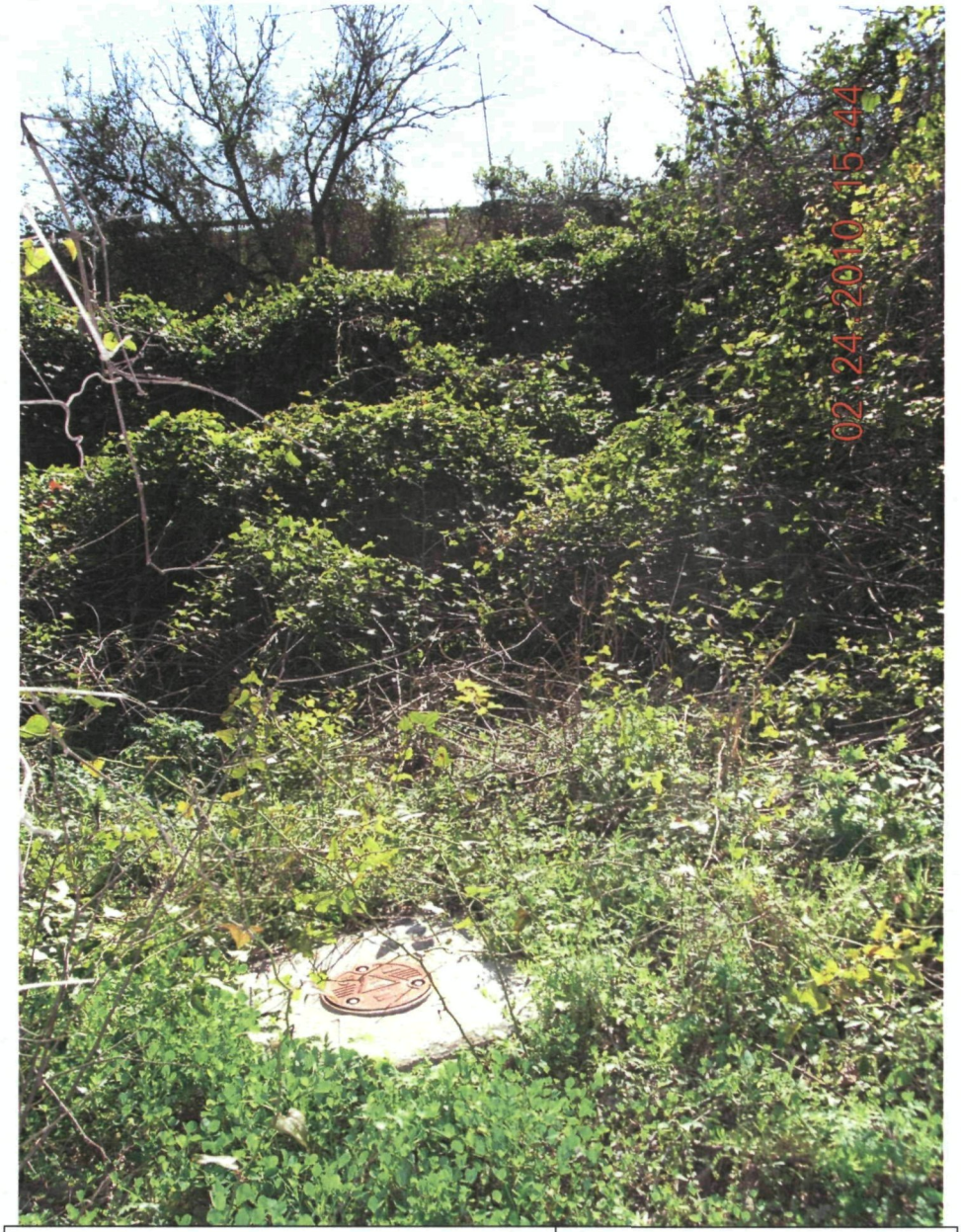


Photograph: 16	Date: 2/24/2010
Photographer: Susy Loftus	Direction: North
Description: Westernmost outside wall of main building, showing signs of rusty deterioration of metal exterior.	

Photograph: 17	Date: 2/24/2010
Photographer: Susy Loftus	Direction: East
Description: Rusty outside wall of main building.	

Photograph: 18	Date: 2/24/2010
Photographer: Susy Loftus	Direction: East
Description: Rusty wall of main building, fallen concrete brick wall, property line fence. Note staining on fallen bricks.	

Photograph: 19	Date: 2/24/2010
Photographer: Susy Loftus	Direction: East
Description: Behind main building	



Photograph: 20	Date: 2/24/2010
Photographer: Susy Loftus	Direction: South
Description: Monitor well installed on property.	

APPENDIX E

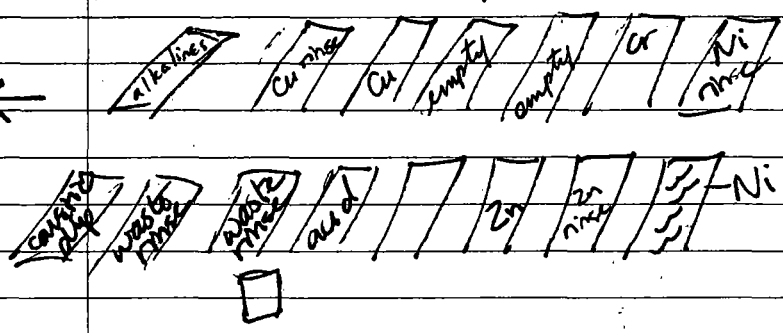
Field Notes

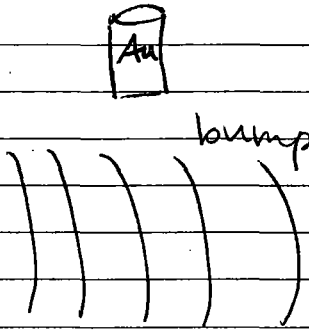
ASTRO
PLATING INC

PreCERCLIS

ASTRO PLATING INC
915 Roosevelt
San Antonio, TX, 78210

~~DFFA~~ 2/24/10 Adrienne Love at Astro Plating Inc.
arrival at ~~3:00 pm~~ 1500, with Susy Loftus & Jorge Salazar. met with Salinas, at 1505. (see amendment)
caustic dip 2 waste Rinse acid drip rinse Ni
alkaline, Cu empty empty, Cr Cr drip rinse Ni





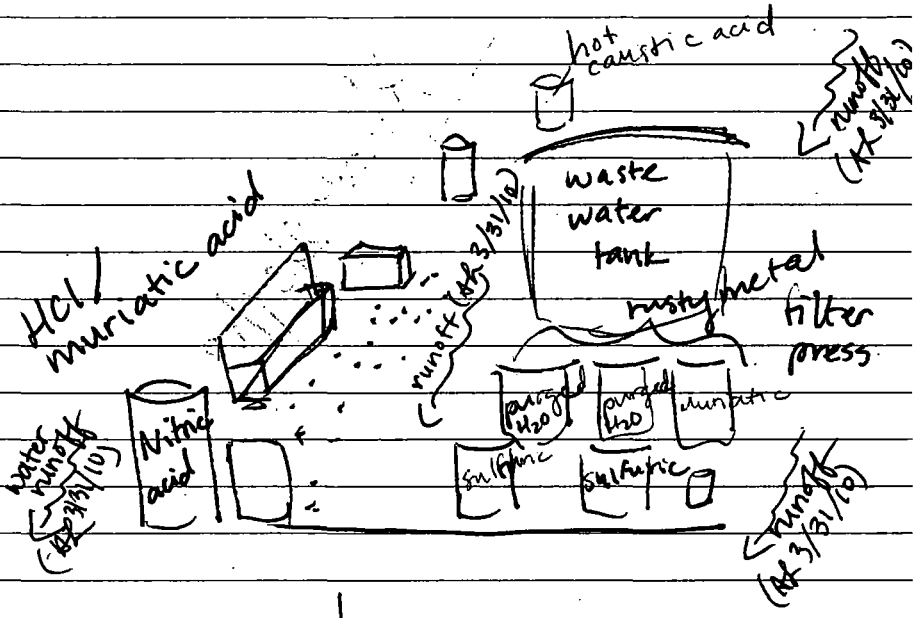
entrance

drainage flows toward highway

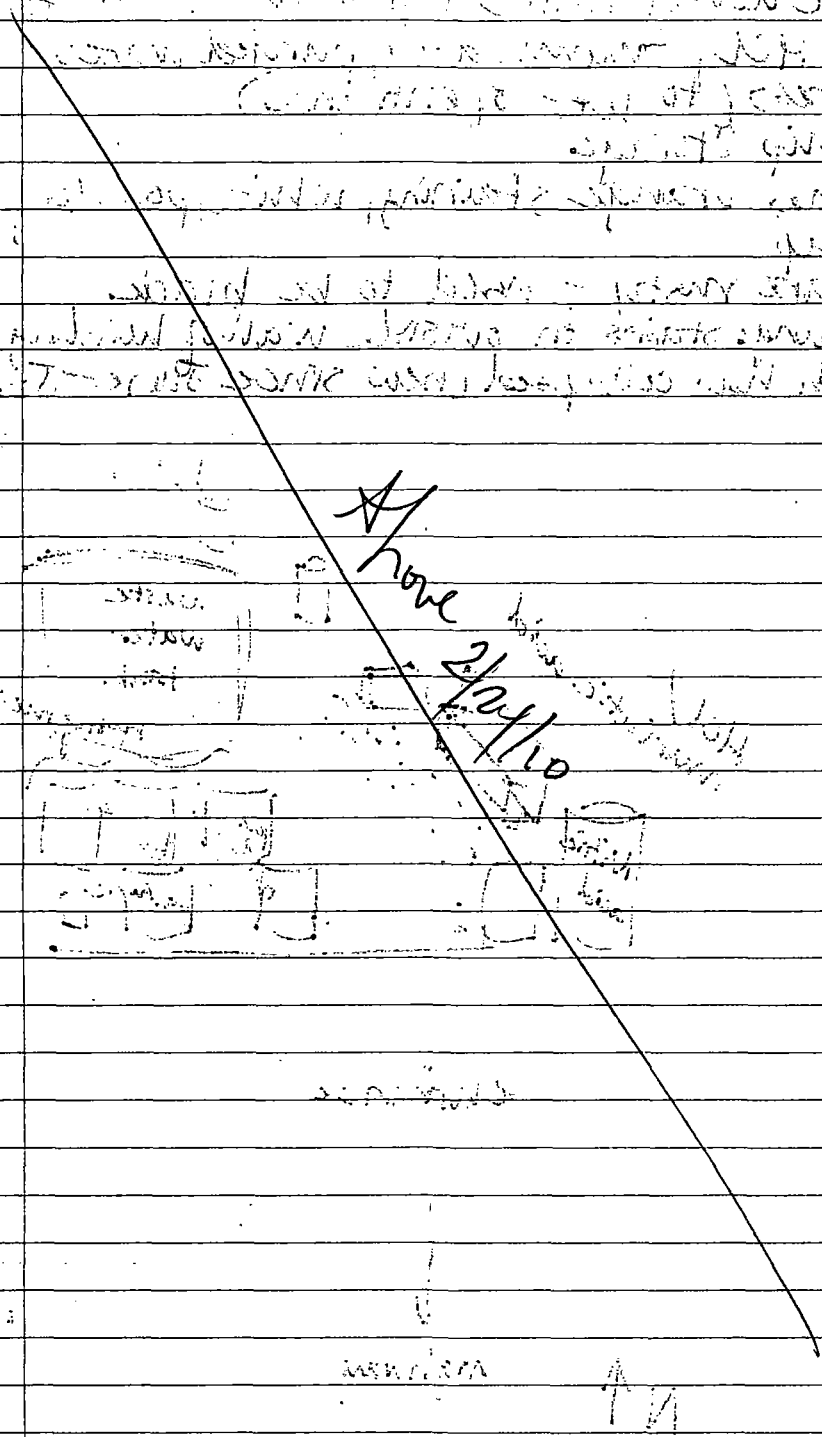
Adrienne 2/24/10

Done 2/24/10

muriatic acid, nitric dip tank, hot caustic
drums of HCl, Sulfuric acid, purged water
filter press (to left of entrance)
paint chip storage
ground has orange staining, white, powdery buildup
drums are rusty - used to be black
pink & orange stairs on outside wall of building, which has collapsed (new since June - Jorge)



A. Love 2/24/10


N
2/24/10

2/24/10 A. Love

side building for storage (to ~~East~~ West) AL 2/25/10
monitor well ~50 ft to ~~East~~ West of buildings AL 2/25/10
last sampling done last April ('09)
2 ~~more~~ wells on site, 2 offsite -
1 on street, 1 on
other side of bridge
Or found in GW when sampled.

inside storage room - tires, bumpers, old machines
no longer in use.

North of facility, 2 schools (Brackenridge High School, elem.)
residential on Presa
Old San Antonio had no zoning
River to the ~~East~~ West - south AL 2/25/10

left facility 1352
on Roosevelt 3rd MW - opened
on other side of I10 is 4th.

adjacent businesses -
Burns Amusement Co
on westside of Roosevelt residential area.
bus stop on same side of street
- Jorge reports that after court ruling, Mr. Salinas said operations would stop (AL 4/22)

court date =
July 13, 2009
(AL 4/22)

Steve 2/24/10

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] - [illegible]

[illegible]

North of facility [illegible] (Wal[illegible]) [illegible]
residential
Old San Antonio [illegible]
River to the east [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

10/25/[illegible]

2/25/10 A. Love

(transferred from notes taken on Pre-CERCLIS Reconnaissance Checklist - separate sheet)
Questions A Love asked owner/operator Daniel Salinas at 1505 before touring the facility.

- Current owner/operator (D. Salinas) has been at site <40 years.
- Site was previously an industrial dumping ground, said as far back as 1910's, similar to the rest of South San Antonio.
- ~~He~~ he said there are no current operations at first, but later said he was still doing nickel and chromium plating & ornamental plating work.
- no waste management practices were specified.
- no hazardous chemical management practices were specified.
- sources seen on site for hazardous chemicals/constituents include: acid baths/tanks and drums, some of which were rusty.
- current number of employees = 3, all of whom appeared to be on site. 2 employees were working in the bumper grinding area, 1 was in the acid bath/tank room most of the time.

A Love 2/25/10

APPENDIX F

Health and Safety Plan